

ORIGINAL

NAS7.000089
NASA - JPL
SSIC No. 9661

REMEDIAL PROJECT MANAGERS' MEETING

ENVIRONMENTAL PROTECTION AGENCY

75 Hawthorne Street, San Francisco, California

Ninth Floor

10 APRIL 1996

ATTENDEES:

Julie Anderson, EPA

Greg Baker, EPA

Jon Bishop, RWQCB-LA

Charles L. Buril, JPL

Mark Cutler, Foster Wheeler

Debbie Lowe, US EPA

Dan Melchior, Foster Wheeler

Penny Nakashima, DTSC

Stephen Niou, URS

B.G. Randolph, Foster Wheeler

Peter Robles, Jr., NASA

Michelle Schutz, EPA

L. R. Linn & Associates
Suite M-10
345 South Figueroa Street
Los Angeles, CA. 90071
(213) 628-7874

REMEDIAL PROJECT MANAGERS' MEETING

ENVIRONMENTAL PROTECTION AGENCY

75 Hawthorne Street, San Francisco, California

Ninth Floor

10 APRIL 1996

ATTENDEES:

Julie Anderson, EPA

Greg Baker, EPA

Jon Bishop, RWQCB-LA

Charles L. Buril, JPL

Mark Cutler, Foster Wheeler

Debbie Lowe, US EPA

Dan Melchior, Foster Wheeler

Penny Nakashima, DTSC

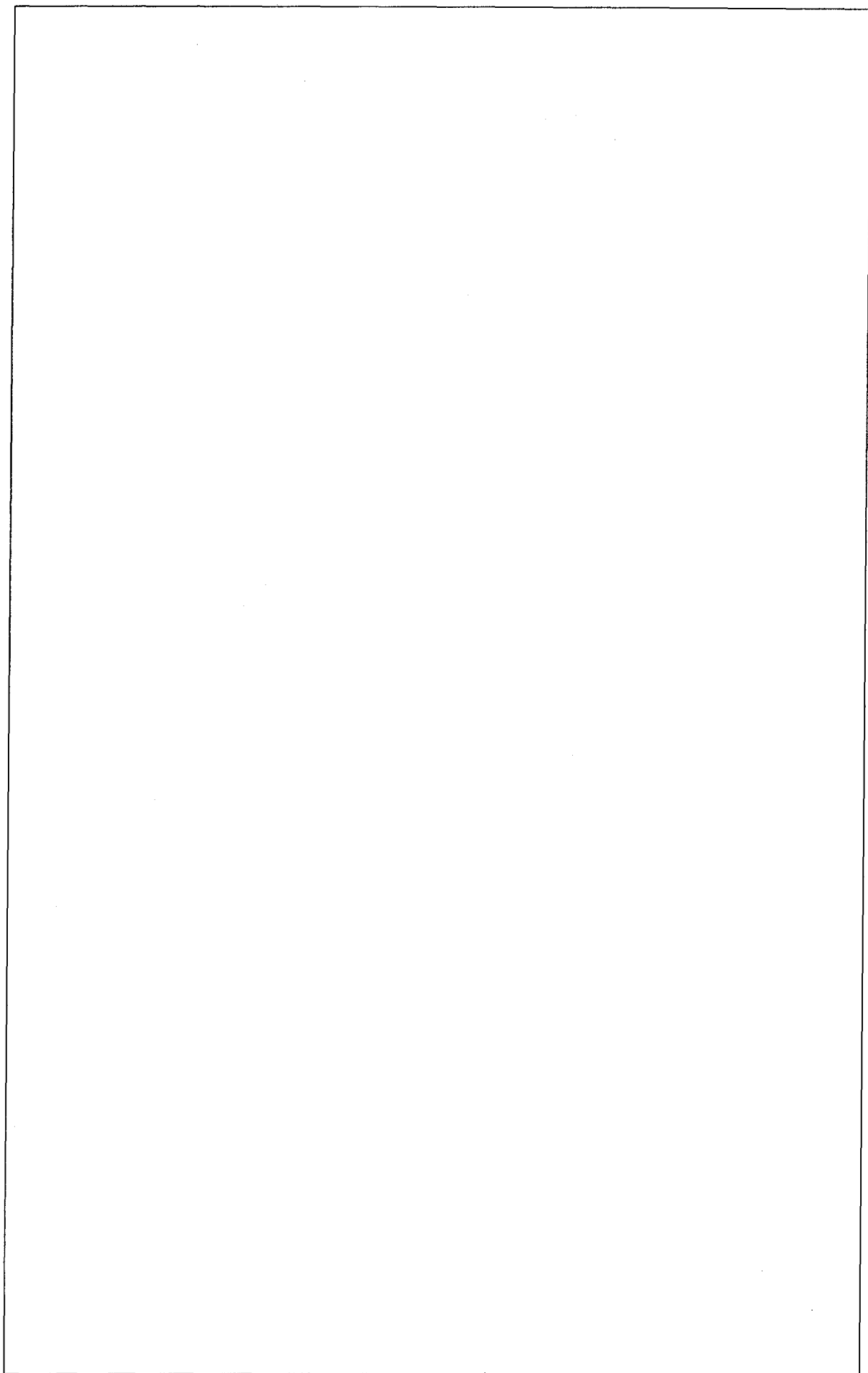
Stephen Niou, URS

B.G. Randolph, Foster Wheeler

Peter Robles, Jr., NASA

Michelle Schutz, EPA

Reported by: Louise K. Mizota, CSR 2818



1 April 10, 1996

2 9:15 A.M.

3
4 BURIL: Maybe we should go around and just
5 introduce everybody, and also for the benefit of the
6 reporter.

7 ANDERSON: I'll start. I'm Julie Anderson. I'm
8 Director of EPA's Federal Facility Cleanup office.
9 We have all the NPL federal facilities that are
10 currently going through cleanup, plus we also deal
11 with any facility that's a closing base, whether
12 it's on the NPL or not. So we have about 50 bases
13 in our unit that we're working with. And glad to
14 have you guys come on in and visit.

15 BAKER: I'm Greg Baker with the EPA. I'm
16 between Julie and Debbie in the scheme of things
17 here.

18 MELCHIOR: I'm Dan Melchior from Foster Wheeler.

19 ANDERSON: Foster Wheeler is the consultant?

20 MELCHIOR: Consultant to the Jet Propulsion
21 Laboratory.

22 LOWE: I think everybody knows who I am, but I'm
23 Debbie Lowe and I'm reporting to Julie for the EPA
24 and working on the project at JPL.

25 BISHOP: I'm Jon Bishop with the Regional Board.

1 SCHUTZ: My name is Michelle Schutz. I used to
2 be the RPM. I actually negotiated the FFA with
3 Chuck and Dot and a few other people.

4 NIOU: Stephen Niou, with URS, EPA technical.

5 ROBLES: Peter Robles. I'm the NASA management
6 office, NASA representative.

7 BURIL: Chuck Buril, Jet Propulsion Laboratory,
8 assisting Peter in the implementation of all the
9 requirements for the FFA and the project as a whole.
10 And I also manage the Environmental Affairs Office
11 for JPL.

12 RANDOLPH: B. G. Randolph, Foster Wheeler,
13 Operable Unit 2 Manager.

14 CUTLER: Mark Cutler, with Foster Wheeler, the
15 operator for the groundwater.

16 ANDERSON: Do you want to introduce yourself:

17 LINN: Lester Linn. I'm with Louise Mizota, the
18 reporter.

19 BURIL: What we're here to talk about a little
20 bit briefly is try to bring everyone back up to
21 speed. Debbie and Jon and Penny and Stephen are all
22 pretty well up to speed on the project.

23 I thought we'd spend some time, though, to
24 familiarize Greg and yourself with what we've got in
25 terms of the project and some of the data we have

1 thus far and some of the rationale behind what it is
2 that we were talking about.

3 ANDERSON: I appreciate that.

4 BURIL: So let me start off with that, then.

5 I'm going to go back in history a little
6 bit just to try and give you a perspective of how
7 things have generated thus far.

8 Back in 1980, we're going back quite a
9 ways here, we actually found that the City of
10 Pasadena water wells were beginning to show volatile
11 organic contamination. I don't have a map right
12 here in front of me, but let me see if I can get one
13 up here that will show you the relative locations,
14 approximately, where those are.

15 This is a poor facility map. I apologize
16 for the quality of it. We weren't able to get this
17 particular one on the computer yet. But the
18 off-site public supply wells are pretty much located
19 down in this area through here for the City of
20 Pasadena. I have an exact map that I will show you
21 a little bit later on.

22 I also have two Lincoln Avenue Company
23 water wells that are located approximately here and
24 about here on the scale of this map.

25 In 1988 JPL completed the PASI as required

1 by SARA and did identify that there were some issues
2 that would be a potential concern. These revolve
3 principally around seepage pits that were used back
4 in the '40s and '50s for essentially all the
5 facilities that were present at JPL at the time.
6 They received Laboratory wastes as well as sanitary
7 wastes and a variety of other things. But the
8 principal one that we were concerned with was the
9 volatile organic materials that would be used during
10 the testing of rocket motors and so forth.

11 We found that there were a good number of
12 those, which I'll go into here in a little bit.
13 Approximately 41 locations. I'll describe those a
14 little bit more in detail down the road.

15 We also identified a couple of other areas
16 in terms of disposal sites that were on site at the
17 time and developed our program around those
18 findings.

19 Now, we conducted an expanded site
20 inspection back in 1990. At that time we installed
21 seven groundwater monitoring wells. These were the
22 first seven, and of those I believe two of them were
23 multi-port. Mark?

24 CUTLER: Yes.

25 BURIL: The multi-port wells, which I'll

1 describe in a little more detail down the road, have
2 the ability to monitor both vertically and provide
3 data points in the lateral sense. And we did a
4 greater identification of the seepage pits
5 themselves at that time.

6 About this time -- I think, Michelle, you
7 came on when? About '91 time frame, approximately,
8 somewhere in there?

9 SCHUTZ: Yes. Maybe '92.

10 BURIL: Somewhere in that time frame.

11 Through the time of '90 to '92 we actually
12 were listed on the NPL on October 14, '92. The
13 federal facilities agreement that Michelle and I
14 worked with we signed in December of '92.

15 We completed more wells. Now, these wells
16 were not part of the work plan. This was additional
17 work that we felt would be necessary to try to
18 understand the site to a greater degree. And we
19 went ahead and put these in in an effort to try and
20 get a better understanding as we got into the
21 project itself. Those are Wells Number 8 through
22 11. Again, I'll have a map and discuss those in
23 more detail.

24 The last bullet there was the first series
25 of documents, which was the work plan, QAPP, the

1 HASP, all the ones that are associated with it.

2 What, seven documents, eight documents, Michelle?

3 Do you recall?

4 Debbie had asked that we discuss a little
5 bit about the JPL/NASA interface. I have a little
6 bit of that here and then Peter has a little bit of
7 it as well. So let me just briefly give you some
8 insight as to how things work from JPL's
9 perspective.

10 When this whole thing started at the Jet
11 Propulsion Lab, NASA did not have a presence that
12 was knowledgeable in the environmental
13 considerations. As such, they were pretty much left
14 to their own devices as to how to figure out what to
15 do. What they asked JPL to do was to essentially
16 supply the expertise that would hopefully be able to
17 work through this problem with them.

18 That's where I came in. In fact, I was
19 hired in '91 as principal to try to set this up in
20 addition to setting up an environmental compliance
21 program for the Laboratory. Actually, I'm a
22 contractor for NASA. I work for Cal Tech.

23 ANDERSON: Oh.

24 BURIL: We have a prime contract with Cal Tech
25 and NASA that essentially establishes all the

1 criteria for performing not only the research
2 things, I'm sure you've heard of things like
3 Magellan, Gallileo, Voyager, a variety of projects
4 of that nature, but we also run the facility for
5 NASA as a whole. Currently I think we outnumber the
6 NASA folks by about 200 to 1. There's about 23 in
7 the NASA management office, where Peter is residing,
8 versus about 6,000 JPL employees and contractors.

9 Pete, do you want to go ahead?

10 ROBLES: Sure. The contract that is with Cal
11 Tech, the facility, again, JPL is owned by NASA.
12 The people are owned by California Institute of
13 Technology. The contract we have with Cal Tech is
14 called an FFRDC, a federal facility research and
15 development contract. It is not a GOCO. GOCO means
16 that you manufacture something. We don't allow Cal
17 Tech to manufacture anything.

18 Research. They do pure research. This is
19 under the auspices of NASA since it's been under
20 their direction since 1959. According to the
21 agreement they have to meet the Federal Acquisition
22 Regulations 48 CFR, Chapter 1. They have to abide
23 by standards and requirements within the NASA
24 contract with them. We negotiate those
25 requirements. Certain NASA regulations apply.

1 Others don't. And it's on a case-by-case basis.
2 There's an award fee. It costs NASA about a billion
3 dollars a year to run the program. The award fee is
4 about \$16 million for the University if they get --

5 BURIL: If we do everything right.

6 ROBLES: If they get straight As.

7 Under this contract, Superfund was beyond
8 the scope of the contract. So what we had to do was
9 develop task orders. That's how work is done at
10 JPL. Anybody, not only NASA but other agencies,
11 other private corporations come in and ask JPL to do
12 research. And it's done through task orders, which
13 is approved through our office, the NASA management
14 office there.

15 So we specifically set up a special task
16 order under the contract called CG 127. Basically
17 that is the authority that Chuck Buril works under.
18 He is allotted five work years of personnel and it's
19 paid in the overhead. It doesn't come out of our
20 normal NASA Superfund appropriations through
21 Congress. It's just normal overhead.

22 But the requirement is that we have him
23 running the Superfund program for us. So therefore,
24 he is required to do that, and so therefore he gets
25 Foster Wheeler. So Foster Wheeler is the sub of our

1 contractor.

2 MS. ANDERSON: Could you explain the funding
3 part again? You said it doesn't come out of your
4 normal NASA Superfund.

5 ROBLES: No. His salary, his work, part of his
6 personnel comes out of what we call overhead, burden
7 rate. We charge it to the burden rate. We pay
8 that. That is the cost of doing business at JPL.

9 MS. ANDERSON: And the Foster Wheeler contract,
10 does that come out of the Superfund or does that
11 come out of --

12 ROBLES: That comes out of the NASA Superfund
13 account.

14 BURIL: The way it's set right now, there's
15 actually two pots of money I utilize to try and
16 support Pete in the project.

17 The first pot is what I pay Foster Wheeler
18 out of. That comes from Construction of Facilities
19 budgets that are appropriated from Congress by NASA.
20 There is essentially a fenced portion of that CoF
21 budget that is specifically for environmental
22 compliance, can be spent on nothing else. Of that
23 I've got a \$7 million chunk. I don't know which
24 year it is to pay for --

25 ROBLES: That goes through the A106 process.

1 BURIL: That's what we use to pay for Foster
2 Wheeler services. Essentially, Foster Wheeler
3 provides all of the laboratory services through
4 subcontract, drilling services, surveying.
5 Basically everything except public affairs.

6 Myself, I'm pretty much, I guess you could
7 term it project coordinator overall in terms of
8 keeping Foster Wheeler on track with their contracts
9 and working with Peter on scopes of work and so
10 forth.

11 I also head up the legal aspects of things
12 through Cal Tech. We have legal advice. We also
13 have concerns regarding, since our contractual
14 requirement is with NASA, I have a contracts person
15 on a group that sits and works on the project. We
16 have procurement people because of the nature of the
17 contracts and being very visible in terms of NASA
18 and GAO, which is currently in the middle of an
19 audit with us.

20 ANDERSON: You know of them.

21 BURIL: I know. There's a lot of them.

22 ROBLES: The key is that out of the 26 NASA
23 people only one person is responsible for safety,
24 health, environmental and facilities. A staff of
25 one.

1 I have to depend on him. Either I have to
2 get my own staff or else I have to depend on Chuck.

3 BURIL: And I am the manager of a group of 10
4 people. And those 10 cover virtually all aspects of
5 environmental compliance for the Laboratory, air
6 quality, water quality, hazardous waste, NEPA,
7 recycling. You name it. Virtually the whole thing.

8 It's kind of an interesting situation.
9 It's one that I grouse a little bit about, but thus
10 far it's worked fair, and that is that this is the
11 only potential \$100 million project at JPL that has
12 not one full-time person working on it.

13 ANDERSON: Really?

14 BURIL: Not one. Because I spend my time spread
15 across a variety of things, as you might imagine. I
16 have one lady who works diligently on the project,
17 but she's also helping out on the other things.
18 That's Judy. She spends about 80 percent of her
19 time on the project. But there's no one single
20 full-time person on the project, which is kind of
21 unusual.

22 ANDERSON: So when Debbie sits down to meet with
23 you in a meeting like this, who is normally her
24 contact?

25 BURIL: It would be either myself or Peter,

1 generally.

2 ROBLES: I'm the official RPM for the site, with
3 the authority to obligate the government. Not
4 Chuck.

5 ANDERSON: Can you explain a little bit how the
6 organizations mesh with the hierarchies and so on,
7 if we ever were to end up in a dispute, where we
8 might go?

9 ROBLES: If we ended up in a dispute I would
10 have to go to NASA headquarters where NASA
11 headquarters resource. And NASA headquarters,
12 they're broken out into codes. We're under Code S,
13 space research. We would go to our general
14 counsel up there. And we would have to get their
15 approval to start any dispute resolution issues and
16 they would then take over.

17 We do have one general counsel on staff
18 and he would be the focal point for that. But it
19 would come out of NASA headquarters for any dispute
20 resolution issues as such.

21 ANDERSON: So you don't have a regional NASA
22 kind of a --

23 ROBLES: No. NASA is very decentralized. I
24 used to come from the Air Force. I was an ex-Air
25 Force officer, and so on. There's no such thing as

1 a regional or command or anything else. NASA
2 specifically was designed to be decentralized.
3 They're broken up into centers and each center is
4 autonomous. The centers run themselves. We're
5 treated like a sister center, but we are a FFRDC
6 contract. So everything is done at that level. We
7 would have to go straight to headquarters. There is
8 no region or anything else as such.

9 There is an environmental office, Code JE,
10 that we coordinate all of our environmental items
11 with.

12 ANDERSON: That's in Washington?

13 ROBLES: NASA headquarters in Washington, D.C.
14 It's run by Olga Dominquez. The person that we work
15 with for funding purposes is Maria Bayon and Mike
16 Green. Those are our points of contact.

17 BURIL: It's interesting to note also that at
18 the NASA headquarters level I think they're down to,
19 what, nine people now for the entire agency.

20 ROBLES: They have to go through a 66% cut right
21 now.

22 BAKER: Nine people in NASA environmental?

23 ROBLES: Yes. There were 19. They're going
24 down to nine. So they only have enough people to
25 answer the mail.

1 ANDERSON: We only have one other NASA that we
2 really deal with in any way here and that's the one
3 right down at Moffett Field. We've been involved
4 with their cleanup.

5 How many are there that are reporting to
6 these nine folks back in Washington?

7 ROBLES: Well, you have 12. You have Kennedy
8 Space Center. You have Marshall. You have Johnson.
9 You have Michoud. Stennis. You have Wallops
10 Springs in Virginia. You have Goddard in Maryland.
11 You have Lewis in Cleveland, Langley in Virginia.
12 And you have Ames in San Jose. And then there's
13 Dryden at Edwards AFB, which I used to run as well.

14 BURIL: And White Sands.

15 ROBLES: And White Sands. Dryden is under the
16 authority of the Air Force. So that's it. Now, I
17 do have another Superfund site where I'm dealing
18 with Richard Russell.

19 ANDERSON: At Edwards.

20 ROBLES: Right. The JPL Edwards facility. What
21 we do there is, we have them send money straight to
22 the Center for Environmental Excellence, the Air
23 Force, out of Brooks, because we have to do it to
24 the Air Force standards because we lease the
25 property from the Air Force. We are the operator,

1 but they own the property, and the lease agreement
2 says we have to clean it up according to Air Force
3 and EPA standards. So we felt that it was prudent
4 just to send the money there straight ahead. But
5 for JPL Pasadena, it's contracted out through the
6 JPL Procurement Office.

7 ANDERSON: Thank you.

8 Any more questions you wanted to ask on
9 that, Greg?

10 BAKER: Given that dual experience between Air
11 Force contracting and -- in other words, do you find
12 similarities?

13 ROBLES: There's no difference in time. The
14 only reason why we use the Air Force Center for
15 Environmental Excellence is this funny thing called
16 obligation. It doesn't care how much money you ask
17 for or how much you're going to spend. They want to
18 know how much have you obligated. When we send it
19 to the Air Force it's obligated. It doesn't have to
20 be awarded. But when the Air Force sends it to the
21 Air Force center it's not obligated until it's
22 awarded. So that's a problem that our agencies
23 face.

24 For the Edwards facility we find it more
25 prudent to send our money there to get a contractor.

1 Otherwise, if we got our own, then we have to do
2 redo all the work to Air Force standards because
3 they have above and beyond requirements from the Air
4 Force.

5 For the JPL Pasadena we find it more
6 prudent to go through the JPL procurement system as
7 well. If we had to take it out of their hands, then
8 I would have to have a whole set of oversight
9 managers. So I would have to get a second
10 contractor to oversee Foster Wheeler and I would
11 have to go through another procurement system. I
12 don't want to go through NASA headquarters
13 procurement. I mean, I can't get anything out of
14 them. That's why I purposely get the money out of
15 their hands and send it to the center. That's why I
16 wanted to come to JPL and let their procurement
17 system get it. It's much easier to gear it through
18 JPL than the Air Force center. NASA headquarters
19 has not yet procured one Superfund contract. The
20 centers do it.

21 BAKER: Finally, what's the significance of the
22 difference you're pointing out between GOCO and
23 FFRDC?

24 ROBLES: Because in many cases with a GOCO
25 questions have been asked about if you're

1 manufacturing you can create a conflict of interest
2 issue, the procurement capabilities, because an
3 FFRDC is unusual. It's streamlined much, much
4 faster.

5 With a GOCO you don't give the contractor
6 that much procurement authority. This is basically
7 a loose autonomous relationship that we have with
8 JPL. And they basically can procure a lot faster
9 and a lot more broader than we would do with a GOCO.
10 GOCO you contract for a specific item. I want an
11 aircraft. I want something straight. Nothing
12 asked. With JPL there's a lot of flexibility
13 because you don't know how much it's going to cost,
14 especially when you're looking at going to Mars.

15 We plan on putting people on Mars by the
16 year 2020. Part of that is the Surveyor, Mars
17 Surveyor and so on. So they go out there and
18 procure with universities, they go out and procure
19 with private contractors. They procure with other
20 universities. They procure with international
21 associations. So they have a broad scope and
22 capabilities for doing that. That's the difference.

23 ANDERSON: Is there any difference in liability
24 or indemnification?

25 ROBLES: We're looking into that. Right now --

1 BURIL: That is a very large bone of concern for
2 both parties.

3 ANDERSON: Right. I won't put you through that.

4 ROBLES: The reason that NASA has not, to date,
5 ever gone after Cal Tech. That has been on purpose.
6 If we don't handle this correctly, we will send
7 shock waves through the agency. The agency is being
8 downsized. Kennedy is going to be totally
9 privatized. If any contractors cannot get
10 indemnification they will never bid on that work, so
11 we would never see another Space Shuttle go up into
12 space. So we have to be very careful how we treat
13 JPL.

14 We are looking at that, though. We have
15 our own -- NASA headquarters and us have procured a
16 PRP determination. The site was owned by the Army
17 originally in 1940.

18 ANDERSON: Hmm.

19 ROBLES: And we know all of the history. We
20 have photographs and documents and everything else.
21 And the Army Corps of Engineers has come in. This
22 site has been called a former utilized defense site,
23 FUD site. So the Army came in. They're afraid
24 we're going to come after them and Cal Tech is
25 afraid we're going to come after them. So we've sat

1 down and looked at the issues. And we will get an
2 answer by June. So we will determine that. But
3 yes, that has been looked at very carefully.

4 ANDERSON: And currently our FFA is just with
5 NASA?

6 ROBLES: Exactly.

7 BURIL: That's correct.

8 ANDERSON: All right.

9 ROBLES: Any other questions?

10 BURIL: Going into a little bit more of the site
11 history now and try to give you a better on-site
12 feel for what it is that we're dealing with now.

13 As I indicated earlier, we went through a
14 series of investigations to try and determine what
15 the site history was all about. We had to go back
16 to the records that Peter was talking about, and the
17 records were somewhat sketchy back in the '40s and
18 '50s, although we did have photographs and project
19 documents and so forth. A lot of the documentation
20 that would have said anything in terms of how much
21 we bought versus how much we used of a given
22 material simply didn't exist. They were lost to
23 history, thrown away, something. I don't know.

24 Anyway, what we came down to is a fairly
25 exhaustive research on the archives that we have at

1 JPL. We have a fairly large archive system for the
2 Laboratory. It's principally based around
3 scientific data that's generated from the variety of
4 projects that we have. We do have some other data
5 that talk to the early days of JPL and the project
6 developments that went on.

7 As an indication, JPL was the one that
8 developed the first guided missile system for the
9 Army and also was the first to develop the solid
10 rocket motors for the Army. So there was that kind
11 of research that was going on. This was back in the
12 Army days in the middle to late '40s. And that
13 continued on through a variety of different things
14 of that similar kind of nature up through the '50s,
15 when NASA came to acquire the site in 1959.

16 Now, we went back to as many facilities
17 drawings as we could find, going all the way back
18 into the very earliest days of JPL. And the fellow
19 who did that is sitting right here. He literally
20 went through thousands, I believe, of drawings that
21 were available to us to try and understand what was
22 here and what was being utilized as a potential for
23 disposal of materials into the environment.

24 What he found was a bunch of these seepage
25 pits, apparently associated with just about every

1 facility that was on site. This was going on prior
2 to the time that JPL was placed on sewers and
3 connected to the L.A. County Sanitation sewer lines.
4 That happened back in the late '50s, early '60s, by
5 all accounts that we can generate. We don't have
6 any specific documentation that such and such
7 building was placed on a sewer on X date.

8 We also relied a great deal on site
9 photos. JPL had a fairly rich history in terms of
10 photographs. And we were able to go back and look
11 through the photographs and see the development of
12 the site and comparing it to current-day locations
13 and topography and so forth and try to identify
14 where the heck were these places.

15 Many of these places now, quite literally,
16 have buildings built over them. Some of the
17 locations are in flower beds, on hillsides, any
18 number of different kinds of situations that were
19 radically different than what they were back in the
20 time that they were being used.

21 ANDERSON: Were they used under Army ownership?

22 BURIL: Basically, we believe that to be the
23 case, yes. And that's why we looked to the idea
24 that the seepage pits were the principal source of
25 the contamination. Because once NASA stepped in,

1 the sewer lines were hooked up, these seepage pits
2 were abandoned. And there wasn't anything that gave
3 us indication that there was anything else being
4 disposed of in a waste pit or something of that
5 nature. So it appears that the bulk of it that we
6 could identify was under the Army control.

7 ANDERSON: How long have you guys been there;
8 NASA?

9 ROBLES: 1959 is when we took over the site.
10 And we've stated that, as far as we're concerned,
11 we'll pay for the Superfund cleanup. That has
12 always been our case.

13 BURIL: Be sure you get that down on the record.

14 ROBLES: That might change by June, Chuck.

15 BISHOP: And the sewers went in in '59?

16 BURIL: No. It was sometime after that. The
17 early '60s is the best information we have. But
18 exactly when they went in and for what buildings, as
19 far as a sequence of events, we've never been able
20 to piece that together.

21 Now, we also had to rely a great deal on
22 individuals that were at the Laboratory since a lot
23 of the information was simply not available in
24 written form. We also performed some rather
25 extensive reviews with former and current employees.

1 For example, I had one fellow in my employ for a
2 while who is still working at the Laboratory in
3 another group. He is 76 years old. He's been there
4 for his entire career, 46 years. So he's a
5 tremendous resource, and he's also a safety
6 professional as well, had been in the safety
7 organization for that entire time. He was able to
8 almost literally lead us to some of these locations
9 even though they were in the middle of a parking lot
10 and say, "Oh, it's about here" kind of thing. We
11 got a lot of information in that fashion.

12 Most of it I guess you could term
13 anecdotal, but nevertheless it was very valuable to
14 us to be able to try and identify which of these
15 facilities actually had potential for concern and
16 which ones were really much less of a potential and
17 really probably didn't need as much investigation.

18 The results of all this is that we
19 identified 41 possible locations for the seepage
20 pits to be a contributor to the contamination that
21 we found in the groundwater and surrounding JPL.

22 Again, most of these areas or facilities
23 were ones that used chemicals and then dumped them
24 into the seepage pits.

25 B.G., maybe you can give us an example of

1 the kind of things. What we found in large part was
2 things like wash-downs of equipment, a variety of
3 types, rocket engines, very small-scale test
4 engines. In fact, I believe -- I'm trying to recall
5 the exact number, but there were no JPL tests with
6 engines greater than 10 pounds of propellant, is my
7 recollection.

8 Is that what you recall as well, B.G.?

9 RANDOLPH: It would be 10 pounds or less.

10 BURIL: We had a facility up at Edwards Air
11 Force base that we tested the larger ones. So
12 anything that was a 50-, 90-pound rocket engine we
13 tested at that location because it was a tremendous
14 site. Obviously, it made a heck of a plume.

15 Basically, then, we identified these
16 things as the most likely source of contamination to
17 the vadose zone and to the groundwater.

18 We also found some other areas that we
19 found some potential concern with. One was in the
20 storm sewer system where back in the, oh, gosh, I
21 guess early '90s we were doing some excavation and
22 came across a site where it was an old catch basin
23 to the storm water system. I was not actually at
24 JPL at the time, but my understanding was that the
25 bottom of this thing is open and when they actually

1 went and pulled the structure out, there was a
2 pretty good smell of solvent and such underneath
3 that structure. So that led us to believe that,
4 well, we've got another issue here with storm drains
5 and so forth, maybe something was poured in the
6 storm drains over time.

7 We also found a couple of sites that were,
8 I think by most accounts, just basically bulldozed
9 areas that were just flat and drums of material were
10 sometimes spread in those areas to allow them to
11 evaporate or percolate into the ground. We
12 identified all of those and brought them into our
13 investigative mode.

14 And then also we found some other areas of
15 contamination. The name of this building is
16 actually the Observational Instruments Laboratory.
17 This is where we actually design the very
18 sophisticated cameras that we use to take pictures
19 of the solar system. The wide field planetary
20 camera is an example of that.

21 During the course of the excavation for
22 the foundation of that building we found a fair
23 amount of hydrocarbon contamination. It was very
24 heavy end stuff. It was basically immobile. We
25 removed a lot of it that was underneath the

1 building. I think we got down to below 50 parts per
2 million. But it was another area of contamination
3 that we identified and ultimately tried to factor
4 that into the investigation as well, a somewhat
5 strange prophecy that it came to be known as "the
6 OIL building."

7 Based on all that information, what we
8 came up with was the following conceptual model. We
9 haven't deviated from this much during the course of
10 the project. I hope it's clear in your handout
11 there.

12 What we have here is a conceptual
13 cross-section through the Laboratory. You can see
14 the various pits that we identified, again in
15 concept, and how the contaminants may have migrated
16 through the vadose zone and ultimately into the
17 groundwater.

18 As a general note, the groundwater in the
19 regional gradient generally flows from the northwest
20 to the southeast. We do see periodic perturbations
21 of that. It's something I'll talk to in more detail
22 as I get into the technical aspects of the program.
23 You can see here we have the drums with the disposal
24 area, the seepage pits, the storm water basin, and
25 we also through the course of other investigations

1 that were conducted previous to these identified
2 that there is a -- thrust fault, B.G.?

3 RANDOLPH: Yes.

4 BURIL: Thank you. I never remember which kind
5 it is. I'm an engineer, not a geologist.

6 We found that there may have been concern
7 for pits being above the fault as well as below the
8 fault, which is why we have an indication there of a
9 thrust fault at that location and possibly some pits
10 above that.

11 So this has been the basis for our
12 development of the investigative work. Like I say,
13 we haven't really deviated from this at all during
14 the course of the project.

15 MELCHIOR: One of the things we should talk
16 about in terms of the thrust fault is that I don't
17 believe it's, if you will, a rigid fault. It's more
18 of a smearing of sediments that exist on either side
19 of the fault. So it's not a razor-type fault that
20 you would see, like San Andreas or something like
21 that. So I think it's important for us to recognize
22 here that --

23 BURIL: That's a good point.

24 MELCHIOR: -- it's not a rigid boundary. We
25 don't think it's a boundary in the normal sense that

1 a fault might be.

2 CUTLER: We can probably modify this, that a
3 fault plane is not a barrier to groundwater like
4 we've seen in --

5 ANDERSON: So it's not clearly defined.

6 BURIL: That's correct.

7 CUTLER: That's correct. The signs we've seen,
8 it is actually very well defined. We don't think
9 it's a barrier. Because we did some trenching in
10 the course of -- sort of identify the thrust fault
11 at the site, who knows where it could branch in its
12 various parts. Is that a problem?

13 BURIL: A little bit. Not very much because it
14 wasn't something that would be a real problem.

15 When we started looking at the site and
16 started talking with Michelle in trying to figure
17 out how to best approach the project, we recognized
18 that we had a number of issues here, one being the
19 groundwater physically located within the immediate
20 site area, because that was obviously contaminated
21 based on our previous investigations. We had the
22 vadose zone soils that were associated with that
23 groundwater essentially immediately above and in
24 proximity to the seepage pits. And then because we
25 had contaminants identified in the drinking water

1 wells to the east of JPL, we had another issue of
2 groundwater contamination off site as well.

3 In trying to establish a means of
4 approaching the project we decided that breaking it
5 into three operable units would be possibly the most
6 advantageous for us to approach. Those were again
7 the on-site groundwater, and I'll give you a map of
8 where the boundaries are set. The on-site sources,
9 the pits and the cesspools and so forth, and lastly,
10 the off-site groundwater.

11 Now, the three operable units are split --
12 again, here is the same diagram. Operable Units 1
13 and 2 are essentially the Laboratory itself and the
14 Arroyo Seco located immediately adjacent to the
15 eastern boundary of the Laboratory. The City of
16 Pasadena wells are pretty much right on this line,
17 right on the border of this operable unit. To the
18 north we have the San Gabriel Mountains, which form
19 a fairly effective barrier to groundwater migration
20 so we didn't feel we needed a further delineation in
21 that direction.

22 And with the regional gradient being from
23 the northwest to the southeast generally, and maybe
24 varying depending upon pumping and recharge and so
25 forth, we didn't feel there was a need to go any

1 further west than the western boundary that we
2 currently have.

3 MELCHIOR: One other feature I'd like to mention
4 is the L.A. County -- what are they called now?
5 They used to be called Flood Control.

6 BURIL: I was going to get into that, but I'm
7 glad you brought it up here. It's probably good to
8 have it on the map.

9 MELCHIOR: Maybe you can point to where it is.
10 There's a major recharge, series of basins that
11 exist along that operable unit boundary.

12 BURIL: That's actually the parking lot there
13 that Peter is pointing out. They're right in
14 between this location here.

15 These are spreading basins that are used
16 specifically for groundwater recharge by the City of
17 Pasadena. They're actually operated by the L.A.
18 County Flood Control District.

19 Basically they have an earthen levee at
20 the head of the canyon, which is essentially right
21 here. And they hold water back from runoff and so
22 forth. They have a variety of debris basins and
23 dams back in the Angeles National Forest. They
24 release this water over the course of time and it's
25 spread throughout these basins. The basins range

1 anywhere from maybe a quarter to half an acre to
2 several acres in size. They spread a tremendous
3 amount of water. In fact, during our wetter years,
4 for example, this year, I expect that we'll probably
5 see those things full through most of the summer.

6 ANDERSON: So are they periodically releasing
7 water into them and not allowing them to --

8 BURIL: It's almost constant when it's
9 available. It's one of these things that when the
10 water is available, they will try to keep water
11 going into these things as much as possible.

12 When the water is not available, like, for
13 example, last year, we had a fairly dry year down in
14 Southern California. As a result, most of the water
15 got spread in the early part of the year. In the
16 summer months there was virtually nothing. It was
17 back to a dry riverbed.

18 That's another part that I'll mention here
19 regarding the Arroyo Seco. It's unfortunate I
20 couldn't bring along some of our large photographs
21 that show this area. But if you could envision a
22 dry riverbed in a desert, it's exactly what this is.
23 The conditions, the geologic conditions there are
24 exceptionally difficult in terms of construction and
25 so forth. We have huge boulders and rocks, cobbles,

1 gravels. Being very high in the alluvial plane, we
2 tend to get a lot of these types of materials. In
3 fact, B.G. accused me at one time of burying a
4 spacecraft in one of the locations he was drilling
5 in because he hit a rock so hard he couldn't
6 penetrate it with a percussion drill rig.

7 No, there's no spacecraft.

8 Anyway, it is a very, very dynamic
9 environment depending upon the time of year and the
10 amount of rain that we might get in any given wet
11 season. I have seen that Arroyo filled from side to
12 side all the way down to Devil's Gate Dam, which is
13 approximately three-quarters of a mile to a mile
14 away from JPL, essentially down south. On the scale
15 of this map it would be approximately where my hand
16 is right here. Beyond that is the City of Pasadena
17 golf course. What do they call that one again?

18 RANDOLPH: I don't recall.

19 BURIL: I don't recall the name of it. The Rose
20 Bowl is just beyond that. And so it's essentially a
21 flood control basin. But, again, I have seen that
22 entire basin, which is probably a half mile wide at
23 its widest point, filled to capacity from one edge
24 to the other. Other years there has been absolutely
25 nothing.

1 ANDERSON: The municipal supply wells are beyond
2 the Arroyo?

3 BURIL: The municipal supply wells are located
4 right along this eastern boundary here.

5 ANDERSON: So right on the boundary?

6 BURIL: Right. These wells appear to derive a
7 great deal of their groundwater from the recharging
8 in the Arroyo.

9 BAKER: When you talk about City of Pasadena
10 wells and --

11 BURIL: And Lincoln Avenue Water.

12 BAKER: Lincoln Avenue wells are the City of
13 Pasadena?

14 BURIL: No. They're actually two separate
15 organizations. The way it's set up out here is the
16 City of Altadena, which is an unincorporated area
17 immediately adjacent to the eastern boundary of JPL,
18 is served principally by the Lincoln Avenue Water
19 Company. Because of the ability to draw water
20 easily, the City of Pasadena also has four of their
21 city wells. I don't recall how many they have.
22 They have quite a few. That supplies about I
23 think -- I want to say approximately about 25
24 percent of the total volume available to the City of
25 Pasadena. 25 to 33 percent, a quarter to a third.

1 Those two companies are the only ones in the
2 immediate area of JPL that pump.

3 BAKER: Are their wells close to each other?

4 BURIL: In fact, you can see one from another.

5 LOWE: Do you have maps later in the
6 presentation?

7 BURIL: Yes, I do.

8 LOWE: Great.

9 BURIL: I'll be going into more detail. This is
10 to try to give you a broad brush overview and then
11 going on from there.

12 In dealing with the Operable Unit 1 and
13 our approach to that, what we decided that we would
14 want to do is to install a total of 16 groundwater
15 wells. Of those right now we have 11 in place. We
16 installed an additional five. And these were
17 capable of monitoring both the horizontal and
18 vertical extent of contamination because several of
19 them were constructed as multi-port wells.

20 We were going to sample all the wells in a
21 wet and dry season for contaminants, both VOCs and
22 metals, and ultimately try to develop a 3-D
23 understanding of the contaminant distribution in
24 that operable unit. We were going to augment that
25 with computer modeling, which is currently ongoing,

1 and then finally try, obviously, to evaluate any
2 actions that we might need to take for remediation.

3 The next map gets in a little bit more in
4 detail and is a little more clear. Hopefully the
5 colors on your handouts are sufficiently clear to
6 be able to see the different types of wells.

7 You can see along the eastern boundary of
8 JPL we have a fairly high concentration of these.
9 This is principally due to the groundwater flowing
10 generally in that direction. Also, we found in the
11 northeastern part of the Lab a higher concentration
12 of these seepage pits. That was the area that was
13 developed first, actually, at JPL. We also have
14 them spread out in a variety of areas here, down
15 toward the south, two wells to the west.

16 The well MW-2 is one that doesn't work
17 very well because it's usually dry. It's one that
18 was placed in there by the Army Corps of Engineers
19 and I guess during the course of time of its being
20 installed the Army ran out money and instructed
21 their contractor to stop work. So except in periods
22 of very high water table that well is generally dry,
23 so we don't usually look at it.

24 We have a number of multi-port wells
25 scattered throughout the site to try and understand

1 the vertical distribution of contaminants. And, in
2 fact, we've sampled all of these wells at least
3 twice now. And many of them we've sampled at
4 least -- I think the oldest of them we've sampled 13
5 times. We have that data buried in the back here as
6 back-up. You may want to refer to it as we go
7 along. But it's essentially historical data in
8 terms of stuff that was done all the way back to the
9 ESI.

10 Just to give you an idea of the individual
11 well construction techniques in a conceptual sense,
12 the standpipe wells, which on this map are the ones
13 in green, these are basically designed to look at
14 the uppermost portion of the aquifer. It's a
15 typical well construction. It doesn't have any
16 ability to sample the vertical component whatsoever.
17 They're designed to essentially grab a sample out
18 and have it analyzed.

19 The means of sampling is through -- I
20 don't know if you've seen these small compact
21 two-inch sampling pumps that they use these days.
22 That's what we use to sample these wells. Fairly
23 typical construction.

24 MELCHIOR: One of the things you might mention
25 is that we have large fluctuations in the water

1 table elevation throughout the site. And as a
2 result of that, we've had to go with a longer screen
3 length. So it's just something to give you an
4 appreciation of when the City of Pasadena water
5 wells are turned on we can see elevation changes, if
6 you look back to the previous map, MW-6 we see water
7 table drops of 50 feet.

8 BURIL: In fact, I've got hydrographs that show
9 that later in the presentation.

10 CUTLER: Overall, it ranges. In less than a
11 year we've seen 80 feet water level changes. It
12 gets up to 90 feet at times.

13 I think what Dan is referring to is the
14 City of Pasadena had their wells shut off for
15 several years while they were building some
16 treatment plants. So static condition; there was no
17 pumping. We had transducers in the ground when they
18 turned these pumps on for the first time after
19 several years. Well 6, clear across the site in a
20 matter of a day or so, a couple days, water levels
21 dropped 10 feet and wells right next to them dropped
22 40 feet. So these wells have a tremendous effect.
23 Almost over a half mile away we were seeing water
24 level changes.

25 ANDERSON: Are they stable now at a current

1 pumping rate?

2 BURIL: No. Actually, they'll turn these on and
3 off on a very erratic basis. It appears to be very
4 tightly associated with the cost of water that's
5 provided by the Metropolitan Water District. If
6 they can actually pump water to save money, they
7 will if, indeed, they still have the allocation
8 allowed to them.

9 One of the things I'll mention about the
10 basin JPL resides in is that it's one that is fully
11 adjudicated. Jon, I know, is painfully aware of
12 these issues. The way that I understand it to work
13 is that unless you have a granted right to pump, you
14 have no right to pump at all. And those granted
15 rights set allocations of total amounts of water in
16 a given time frame that you may pump. If you're
17 going to pump more than that, my understanding is
18 you basically have to buy it from somebody else.
19 You can't take more.

20 BISHOP: Or replace it.

21 BURIL: Or replace it in some fashion, such as
22 spreading.

23 This is just a diagram of the multi-port
24 wells, again in concept. They're a little more
25 complex than what this shows as far as the sampling

1 mechanism goes. But, in essence, it's a multiple
2 number of screens and they are sealed from each
3 other. The distance between screens varies per well
4 depending upon where we're at. We have some wells
5 that are in excess of 1,000 feet deep. We have
6 other wells that are less than 500 feet deep, I
7 believe. So depending upon the location, you'll see
8 the screen intervals, either shallower or deeper and
9 more greatly spread apart.

10 Now, in Operable Unit 2 we struggled a
11 little bit with what we could do with this one
12 because of the nature of our site and the nature of
13 the pits being covered up with a variety of
14 facilities or lost or whatever.

15 What we decided to do was to try and start
16 off with the soil vapor analysis. This was done
17 principally to analyze for the VOC content. Then we
18 looked at sampling the soils at locations that we
19 still had access to. We could actually get a drill
20 rig in here and perform some form of actual
21 drilling. We had 24 locations like that where we
22 sampled down to 100 feet the soils on 10-foot
23 centers, I believe, B.G.?

24 RANDOLPH: Yes.

25 BURIL: We also completed those wells as nested

1 soil vapor wells. I'll show you a diagram of that
2 here in a moment. Basically, it's in the same kind
3 of thought process as a multi-port well for
4 groundwater. It gives you the ability to look at
5 the vertical distribution of contaminants as well as
6 having a data point for the lateral distribution.

7 Our hope here was, again, to try and
8 develop a 3-D understanding of what possible soil
9 contamination might be and ultimately what
10 remediation might be required.

11 The next few things are maps of various
12 things. I'll try and reconstruct this briefly, if I
13 can.

14 You can see in the lower left-hand corner
15 there we have a legend that shows where the soil
16 borings and vapor wells were. These are the 24
17 locations that we were able to actually get a drill
18 rig into and sample at the location or as close to
19 the location of the actual seepage pits as we were
20 able to. In some cases we were about 10 to 20 feet
21 away in some areas, B.G.?

22 RANDOLPH: Yes.

23 BURIL: B.G. was the one who headed up the field
24 work on those, which is why I keep referring to him.

25 Others of these we were able to hit right

1 on. In fact, in a couple of these borings we
2 actually were pulling up pieces of brick which we
3 understood lined these pits. So in terms of the
4 accuracy of the work that we were able to do in the
5 historical search, it appeared, at least at some of
6 these locations, we were very accurate.

7 Now, the next map looks to some specific
8 work that was done for soil vapor. These were
9 actually done at locations that included all the
10 locations that we had access to for the seepage
11 pits, but in addition it had some other areas that
12 were of concern as well. These were generally
13 truck-mounted driven tubes and depending upon the
14 conditions that might be at a given site, we
15 bottomed out anywhere from 10, 12 feet all the way
16 up to about 20-some feet.

17 RANDOLPH: 30.

18 BURIL: 30 feet. Again, the conditions for
19 drilling and doing this kind of work are extremely
20 hostile in terms of the ability to actually get
21 information like this.

22 We placed them as close to the areas as we
23 knew. We also placed them, for example, around
24 Building 306, which is right down here. That's the
25 OIL building. And because of the oil contamination

1 that we found there during construction of that
2 site, we wanted to see do we have any volatiles
3 contamination as well. So there's a variety of
4 areas that we examined in that regard.

5 To just draw a quick conceptual plot in
6 your mind regarding how these were done, on the
7 left-hand side we have a vapor well which, as I
8 indicated, is essentially constructed very similarly
9 to a multi-port well, where we had soil vapor
10 sampling points packed in a sand pack and those sand
11 packs were sealed from each other with a bentonite
12 seal. And the soil vapor probes were essentially a
13 one-shot deal. They were inserted and then left at
14 whatever depth we were able to reach.

15 The Operable Unit 3 approach, we looked at
16 this situation and tried to figure out, well, what
17 is it we're going to be doing here. We knew we had
18 concerns with the off-site wells for public drinking
19 water supply. And so it was a good indication to us
20 that there was a potential for contamination that
21 already migrated past the eastern boundary of JPL,
22 past the eastern boundary of the Arroyo and out into
23 the residential area of Altadena and Pasadena.

24 I wish I had brought some pictures along
25 to show you these, but essentially all these wells

1 that we placed, with the exception of one, were
2 placed either right adjacent to somebody's house or
3 quite literally in their front yard. Their yard was
4 here, the street was here and our drill rig was
5 right there.

6 We placed five wells total in Operable
7 Unit 3. The first four were located -- and this is
8 the map that you should have had, Debbie, the second
9 one I sent you. This is the one you should have
10 had.

11 The four Pasadena wells are located here,
12 you can see these half-filled circles. And our
13 wells are located with the inverted triangles here.
14 Up here at 18, and then, last, out here at Well 20.

15 What we were trying to do was to establish
16 a northerly, southerly and easterly boundary to what
17 we thought was a potential contaminant plume out
18 there, Well 18 being the northernmost, Well 19 the
19 southernmost, Well 20 the easternmost. Well 17 was
20 placed not with the idea of getting a data point for
21 the lateral extent but more for the vertical extent
22 of contamination. As Lincoln Avenue's well is quite
23 literally less than a block away from Well 17, we
24 thought that having an understanding of the vertical
25 component in what might have been the middle of a

1 plume would be a very valuable data point.

2 The last well, MW-21, is actually located
3 in Oak Grove Park. That's a County park down there
4 that offers a variety of opportunities as far as, I
5 think, having the first Frisbee golf course in
6 Southern California, to give an indication. This is
7 a well we installed with a twofold understanding of
8 what it might provide us. It was installed to see
9 whether we had a potential for some kind of
10 contamination emanating from the Laboratory going
11 south, and also to understand whether we had a
12 contaminant contribution coming from up here through
13 La Canada-Flintridge. Now, the original gradient
14 generally comes right through, flows across the site
15 and across this direction.

16 Now, I'll mention this now and I'll go
17 into it a little bit more in depth as we go on. We
18 have found that the wells up here, these are
19 additional public water supply wells that are
20 upgradient from the JPL site. We have found that
21 those are contaminated with perchloroethylene and
22 also with trichloroethylene. I don't have anything
23 more recent than what I was able to supply Debbie,
24 unfortunately. There was a snafu as far as getting
25 the data before I left. And unfortunately I don't

1 have anything past '94 yet, but it's being
2 collected.

3 But the concentrations of the
4 perchloroethylene are fairly high. They range up
5 into hundreds of parts per billion. Some of these
6 wells also have air stripping towers installed.

7 One of the things I'll mention at this
8 juncture as well is for the City of Pasadena wells
9 and the Lincoln Avenue wells, there is also
10 treatment in place already on those wells. For the
11 City of Pasadena, NASA negotiated an agreement to
12 provide treatment services. That's done through a
13 stripping tower, a series of stripping towers,
14 actually. It has about a 4,000 gallon a minute
15 capacity and essentially takes care of all of the
16 water that comes from these four wells for the City
17 of Pasadena.

18 Lincoln Avenue has an activated granular
19 carbon treatment system at their Well 3, which is
20 the one nearest Well 17. Their second well, which
21 is a little further down on Harriet Street, is being
22 considered for one of those treatment systems. But
23 currently we aren't sure if they're going to put it
24 in. NASA is in negotiations with Lincoln Avenue to
25 determine what liability NASA has for providing

1 support to them to deal with that.

2 BAKER: How long have they had the treatment
3 units on the --

4 BURIL: The Pasadena wells, the treatment units
5 were put in in 1990, I want to say. That was prior
6 to my time. Late '89, early '90 is my recollection.
7 The Lincoln Avenue wells, their first granular
8 activated carbon unit went in, I believe it was in
9 '92. It was just shortly after I got to JPL. And I
10 got there late in '91.

11 BAKER: Have the levels of contamination in
12 those wells continued to rise?

13 BURIL: No. In fact, they have dropped in many
14 respects. They tend to hover right around the MCL
15 in most of these wells now. The latest information
16 I got from City of Pasadena, they provide me with
17 this information on a regular basis from pumping the
18 wells, the latest information that I got from them
19 was that their Arroyo well had carbon tetrachloride
20 contamination, which is one of our concerns, at I
21 believe it was one part per billion. I neglected to
22 bring that with me. I apologize for that. The
23 remaining wells were essentially clean. Nothing
24 detected.

25 Lincoln Avenue wells, I don't have a lot

1 of data from Lincoln Avenue. Because of the
2 negotiations that are currently ongoing they are not
3 very forthcoming with data, although they have
4 promised to provide it if we ask for it through our
5 lawyer.

6 ANDERSON: When you said you're in an agreement
7 and negotiations with them for the treatment on
8 these wells, do you supply all the treatment costs
9 for the Pasadena wells?

10 BURIL: That's correct.

11 ANDERSON: So you're now negotiating for the
12 Lincoln wells?

13 BURIL: That's correct.

14 ROBLES: Right. A report came out basically
15 stating they were looking for the deepest pockets
16 and they found JPL. There was nothing to
17 substantiate that we contaminated the site. But
18 instead of arguing with them, they brought a lot of
19 political pressure, we decided to defer that and
20 make sure and then come back later. In the
21 agreement it says if we don't find it, we're not
22 reasonably sure, we will shut off the funding,
23 period.

24 But it is open for them. They can come
25 back and recover costs. But whatever we've paid we

1 can't recover. The idea is we were more concerned
2 with taking care of the public safety.

3 We're doing the same thing with Lincoln
4 Avenue. The problem was at the time that we asked
5 Lincoln Avenue for verification and proof, if they
6 had any, they never came back and answered us. So
7 now we're still negotiating with them. They want
8 the same deal that we have with Pasadena, but they
9 don't even pump as much water.

10 So we want to be equitable and fair with
11 them, but they believe they want to be equal with
12 Pasadena. And we're working that struggle right
13 now.

14 LOWE: Is there any reason why you would think
15 that contamination in that Lincoln Avenue well did
16 not come from JPL?

17 BURIL: That's part of what we're trying to
18 figure out. One of the things that concerns us is
19 that one of the principal contaminants they found
20 had been percloroethylene in Lincoln Avenue. Now,
21 percloroethylene on site has been almost
22 nonexistent, which gives a strong indication there
23 is something else that's creating, at least in part,
24 a percloroethylene concern. If it's coming from up
25 in here and flowing across the bottom of JPL,

1 through JPL or by some mechanism getting to Lincoln
2 Avenue, we don't know yet. That's part of what
3 we're trying to discern using data we're still
4 generating from our second sampling of those wells
5 in Operable Unit 3, and also augmenting that
6 information with computer modeling that we have got
7 ongoing right now.

8 ROBLES: Chuck is going to be talking about the
9 water flow. There is a concern because there is
10 180-degree flow change that could be contamination
11 from this and could now become the upstream very
12 easily, depending on how the water table goes. And
13 so it's to not argue the point. We want to work
14 with them because our biggest concern is to public
15 safety. And we'll come back and deal with the
16 issues if we can prove we're not. But there's
17 nothing to indicate we did, and there's nothing to
18 indicate we didn't. As you know, you look for the
19 deepest pockets, and that's what they want. They're
20 just looking for someplace to augment their
21 infrastructure costs.

22 LOWE: Are there any other industrial sources
23 off that way or that way?

24 BURIL: One of the things, and again I'll
25 mention this at this point, the City of La

1 Canada/Flintridge is historically a bedroom
2 community. There aren't a great deal of industrial
3 sources, certainly nothing on the scale of JPL, as
4 you might expect. However, being a bedroom
5 community and being a fairly old bedroom community,
6 we found a lot of it is unsewered. In fact, a good
7 portion of the city is still using septic tanks for
8 treatment of their household wastes.

9 Now, one of the things that we also found,
10 this is an anecdotal piece of information but one
11 which I have some personal experience with, is that
12 one of the ways people used to keep their drains
13 open is to quite literally pour some of these
14 solvents down the drain and keep them open. That in
15 conjunction with various dry cleaning establishments
16 and so forth that have been there literally for
17 decades, and while we have no tangible proof that
18 there were any dry wells or anything else out there,
19 it would make some sense that back in time gone by
20 that they probably got rid of their waste chemicals
21 by simply pouring them down the sink. So those
22 kinds of things we think may very well have
23 contributed to some contamination upgradient from
24 JPL. In fact, we think that may be what we're
25 seeing in these upgradient wells now, is that kind

1 of contamination, not only because of the history of
2 the community but also one of the constituents,
3 perchloroethylene, we find almost none at JPL, just
4 barely above detection, as opposed to several
5 hundred parts per billion at those locations
6 upgradient.

7 I'm going to jump through to this first
8 table here. I put this table in mainly for your
9 reference. I'm not going to go through it. I'll
10 just put it up here so you know the kind of
11 information that's there.

12 What I've done is asked Foster Wheeler to
13 generate a table that basically went through all of
14 the wells, gave the type of the well, the year it
15 was installed, the drilling method and all of the
16 casing and screen information so that you have a
17 good summary of information there to be able to
18 understand what these wells are telling us,
19 basically, in terms of their location and vertical
20 extent and so forth.

21 The next three pages are just that. Like
22 I say, I'm not going to go through each one of these
23 because I think this is probably more valuable in
24 terms of reference information than anything else.

25 I apologize for this, but you might have a

1 couple of extra pages in there. When we initially
2 did this we didn't have Operable Unit 3 wells. I'm
3 not sure that all of the pages for the first table
4 were taken out. You should have a series of tables
5 there that go from MW-1 through MW-21.

6 What I'm going to talk about now briefly
7 is some of the information that we've been able to
8 glean so far from information that we've had from
9 past studies and also stuff we've had from current
10 studies. What I've got up on the board now is a
11 hydrograph from JPL wells. This is a fairly
12 historically-based hydrograph. This one goes all
13 the way back to 1990 and presents information all
14 the way up to 1995. The different styles of lines
15 are indicative of the different wells that were
16 sampled for water level, and the results that came
17 through.

18 As you can see, there is a tremendously
19 dynamic environment in terms of groundwater levels
20 at JPL. For example, this particular event right
21 here, we were showing some concerns about wells that
22 were being pumped by City of Pasadena, and so forth.
23 This shows what happens when some of those wells
24 kick in. You can see at that particular location,
25 which I believe is Well MW-5 --

1 CUTLER: MH 01.

2 BURIL: Is that MH 01? Okay. -- which is right
3 in the Arroyo. If you refer back in your map you
4 should be able to see it's quite literally right in
5 the Arroyo. It's a tremendous influence and very
6 rapid influence by those wells.

7 I'll go back in history just a little bit
8 more. This goes back to a time of low water that
9 was back in the late '80s, early '90s. I don't know
10 if you folks had it up here, but down south we had a
11 tremendously wet year in the '91-'92 time frame.
12 That's indicated pretty dramatically by this huge
13 rise in groundwater level, almost 90 feet, it looks
14 like. 80 feet. Somewhere in that range.

15 We can then see a seasonal dropping off, a
16 plateau. Then we start seeing another decline in
17 water table, we believe principally due to long-term
18 pumpage from the basin.

19 CUTLER: That's what it is. You can see when
20 they turn the pumps on and then off, on and off.

21 BURIL: Then we had a recharge. And you can see
22 these spikes. These are where the pumps were shut
23 off.

24 Basically, this is just to demonstrate
25 that we have a tremendously dynamic environment in

1 terms of the groundwater recharge and discharge from
2 that basin.

3 A little bit more on that with the next
4 chart. These are from wells that are right along
5 the eastern periphery of JPL, principally in the
6 northeastern portion. It goes through approximately
7 the same time frame. It's actually a little more
8 recent, starting in '92 and through '95. But you
9 can see things are somewhat perturbed up here and I
10 believe -- I'm not sure, Mark, if you know, what
11 caused those perturbations.

12 CUTLER: It's got a little holding pond right
13 before the spreading basins. There's an earthen
14 dam. You can time some storm events. That earthen
15 dam will get washed out and you'll see water levels
16 drop. And they will build it back and the water
17 levels will come back up. So our wells can monitor
18 that pond, whether it's there or not.

19 BURIL: This is what I'll call the fore bay of
20 that whole basin spreading system.

21 CUTLER: This big rain period here, things are
22 getting washed out pretty well.

23 BURIL: One other point I'll make here is you
24 can see the influence of these pumping wells when
25 they really kick into gear and stay on for any

1 period of time. They do have an extremely dramatic
2 effect right on the eastern periphery of JPL.

3 The next series of slides are groundwater
4 contour maps. I'm just going to touch on a few of
5 these. I'm not going to go through each one in
6 detail. If you have questions on any of them I'll
7 be more than happy to try and address them. I'm
8 going to just skip through these and show you the
9 kinds of things we believe are happening.

10 This is starting off with our very first
11 sampling event. This is back in March of 1990. We
12 found what, in essence, appeared to be a fairly
13 large mounding of groundwater at the very head of
14 the Arroyo Seco. We think this is probably
15 associated with this ponding of water that is
16 created for the spreading basins. We saw down here
17 that the regional gradient was essentially pretty
18 much like we had said, easterly, northwest to
19 southeast, that kind of direction.

20 Some kind of a mixing of the flows
21 happening here in the Arroyo Seco. It appears that
22 everything was flowing to the east by the time it
23 got down here a bit.

24 Now, the next map is essentially the same,
25 showing a similar kind of situation, as is the next

1 one, as is the next one. So in the early '90s we
2 saw some fairly routine kind of information, pretty
3 much what we expected to see based on the regional
4 gradient and the local perturbations.

5 Now, in '92, the winter of '91-'92 was an
6 awesome winter. At JPL proper, right here on the
7 Laboratory, I think we had 28 inches of rain. And
8 it was an incredible sight to see the Arroyo Seco
9 filled quite literally brim to brim, edge to edge
10 from the dam all the way to the headwaters. I don't
11 know if this was a 100-year event or a 1,000-year
12 event, 500-year event, but I tell you, it was a lot
13 of water. And it appeared to have created for us a
14 tremendous opportunity to spread water as well,
15 because during the course of the year, after the
16 earthen levee was repaired for the seventh time that
17 year and they were able to keep it in place, we saw
18 that they were spreading water tremendously from the
19 point in time, meaning in the sense to keep it down,
20 while the levee's in place and go on from there.

21 But we saw a very interesting phenomena.
22 Across the Laboratory the groundwater direction
23 appeared to shift almost 180 degrees, something that
24 we had no idea was actually going to be a
25 possibility based on our previous information. So

1 this began to make us think, well, boy, we've got
2 not only an extremely dynamic environment but one
3 that shifts on us. There's no steady playing field
4 here.

5 The next one, later on that same year,
6 shows what appeared to be a shift back to the status
7 quo where you had a regional gradient pushing toward
8 the east and a mound appeared to be adding some
9 water in maybe a southerly component.

10 Same thing on event number 8.

11 And then again in event 9, again we had a
12 fairly wet year in the '92-'93 time frame, and we
13 see what appears to be another reversal event. So
14 very tightly tied, for all appearances, to the
15 amount of water that's spread in the basin and the
16 amount of rain that we get in any given year.

17 The next one is even more interesting,
18 later that same year. It shows all kinds of things
19 going on. Where the water in one area looks like
20 it's moving to the east, another area looks like
21 it's moving to the west, another area to the east
22 again. Very difficult to really discern what's
23 happening.

24 But what is interesting is if you look at
25 the actual elevation contours that we have, they're

1 essentially almost the same contour across the area,
2 1,005 feet. There's an indication there's some form
3 of flux occurring at that particular time, and
4 without better understanding of what's going on
5 inside, there may be very little water flow across
6 the site at that particular time.

7 A little further on into the year we see
8 that influence is beginning to diminish and that
9 we're getting slowly back more toward what we think
10 might be termed the norm of having this groundwater
11 mound up in the head of the Arroyo and a easterly,
12 southeasterly gradient. But we still have something
13 happening here that we're really not sure of.

14 And then finally later on in June of '94
15 we're back to what appears to be status quo. In
16 fact, we stay at that up through November of '94,
17 which is the last RI sampling event that we've
18 completed.

19 So that gives some idea of the very
20 dynamic nature of the groundwater flow in the area.

21 What I'd like to talk to now --

22 ANDERSON: Did you say September '94 was the
23 last set of samples?

24 BURIL: November '94, for purposes of this. Do
25 we have any more additional information?

1 CUTLER: Not on site.

2 BURIL: No, not on site. This was it. We do
3 have more information coming from Operable Unit 3.
4 This was the scope of work that was identified in
5 the work plan.

6 LOWE: You're also going to start on a quarterly
7 monitoring.

8 BURIL: Yes, absolutely. We already proposed
9 and Debbie has indicated our proposal for our
10 quarterly monitoring plan is fine. We're planning
11 to put that into place this June.

12 I'm going to take the operable units in
13 backwards order here. It seems that the concerns
14 may grow somewhat as we get closer to the site. So
15 starting in the Operable Unit 3 area, what we've got
16 is essentially --

17 ROBLES: This is in Pasadena.

18 BURIL: This is in Pasadena and Altadena. What
19 we have is the four wells to the east of the site,
20 numbers 17 through 20. The only thing that we've
21 found that was higher than MCL was carbon
22 tetrachloride at 0.6 parts per billion with the MCL
23 being 0.5. Virtually all the other contaminants
24 that we think we may have a concern with,
25 perchloroethylene, trichloroethylene, et cetera, were

1 either below MCL or non-detected.

2 CUTLER: This is for the first sampling.

3 BURIL: This is for the first sampling event for
4 Operable Unit 3. The one thing we did find, which
5 kind of struck us as being unusual, is we found 29
6 parts per billion of TCE in Well 21. Well 21 is the
7 one that's located to the south in Oak Grove Park.

8 ROBLES: In the Frisbee court.

9 BURIL: The Frisbee golf course.

10 Looking briefly at the Operable Unit 2
11 data from the soil vapor sampling -- first of all,
12 let me say that the non-volatile contaminants that
13 we analyzed for in the soil samples themselves, we
14 found essentially nothing in the non-volatile
15 fraction. We found no metals at above the
16 California limits in terms of STLC or TPLC and
17 really nothing that gave us indication that we had a
18 major problem in terms of metals contamination in
19 the soils themselves.

20 What we did find, though, is we found some
21 areas that may have been a potential concern in
22 terms of soil vapor. I've put the top four on here
23 principally just to give you an idea of the worst
24 leading down to the least contaminated areas. The
25 area at boring number B-16, and I'll show you that

1 here, if I can find the map real quickly where
2 that's at, essentially that is right in the heart of
3 our highest contaminant level on the Laboratory.

4 Well 16 is this one located right here,
5 near these trailers. Now, boring 16, at first we
6 looked at that and didn't think much of it. But I
7 think it was you, Jon, that pointed out that the
8 concentrations were increasing with depth. And we
9 didn't have a bottom end to this, and being the fact
10 that it's very close to the well that is
11 historically our most contaminated well, which is
12 located approximately here, there was good reason to
13 suspect there was something else going on, that
14 perhaps we had a potential for a vapor contaminant
15 plume to be adding contamination to the groundwater.
16 And, in fact, we addressed that through some of the
17 work that we want to continue on with that I'll talk
18 about here in a few minutes.

19 The rest of the wells showed dramatically
20 less in terms of the concentration by an order of
21 magnitude. And they taper off from that point on
22 down.

23 When we looked at Operable Unit 1, the two
24 contaminants that stood out were carbon
25 tetrachloride and trichloroethylene. This is from

1 the two sampling events that were part of the RI
2 investigation. We have quite a bit of other data
3 for a variety of these wells, depending upon when
4 they were installed. All of that is provided as
5 backup information if you want to take a look at it.

6 Essentially we found that there was an
7 area surrounded by four wells that appeared to have
8 the bulk of the contamination. Those are Wells 7,
9 8, 13 and 16. And, in fact, those are all pretty
10 much in the same area of the Lab.

11 Now, what we did is we tried to look at
12 this in terms of, well, what kind of distribution of
13 chemicals are we talking about here? What is the
14 extent of the contamination based on this data we
15 have currently?

16 What I did is I ran this through a program
17 which I'm sure many of you probably have familiarity
18 with, Surfer. I took all the data and fed it in.
19 This is what came out from the carbon tetrachloride
20 for the June '94 event. And it centers around the
21 Well 16-Well 7 area. Well 7 was the most highly
22 contaminated area in terms of carbon tetrachloride.
23 So being centered around that made some sense, and
24 Well 16 is a close second.

25 So having the distribution apparently

1 centered around that area made some sense. All the
2 wells surrounding that, with almost no exception,
3 were either much lower in concentration or none
4 detected. And so we have the computer telling us
5 that the extent of contamination is essentially
6 right along this line. This is a .5 parts per
7 billion line. I couldn't figure out how to get
8 Surfer to talk to AutoCAD, and that's why things
9 don't have the contours on them.

10 But again, what we're looking at now is
11 all along the eastern boundary, across the western
12 boundary and this well here where we did see a tiny
13 perturbation, essentially clean. So this made some
14 sense to us.

15 The thing that didn't make sense is when
16 we slapped up the TCE plot and tried figuring out
17 what was happening there. Now, TCE went off the map
18 and it didn't make sense to us because if carbon
19 tetrachloride were going to be a problem off site,
20 we should have seen similar patterns in this. But,
21 in fact, we didn't. We didn't see anything that
22 even resembled that.

23 So we began to think, well, now wait a
24 minute, there must be something else going on here
25 in terms of possibly an outside influence or

1 southerly component of flow, something else that's
2 creating this open contour consideration.

3 And so we began to think, well, what is it
4 that could possibly explain this?

5 What we came up with, as we were going
6 through the course of this thing, is we began to
7 look back at the Stiff diagrams that we generated.
8 Now, I have provided to you, again more as reference
9 than a need to go through each individual one, all
10 of the Stiff diagrams that we have I believe for all
11 of the Operable Unit 1 wells. That's for all
12 screens as well. So you've got a huge pile of these
13 things, which I'd be happy to put them up on the
14 viewgraph and go through them if you'd like, but I
15 think rather than going through each individual one,
16 I think it might be more beneficial to look to the
17 ones that really struck us in terms of what their
18 impact may be on the project.

19 Let me start off by looking at the
20 upgradient and then the wells on site and then the
21 well that we think may be of concern, which is Well
22 10.

23 When you look at the upgradient wells, and
24 we're looking at Well 14, and if you look back at
25 your map you'll see that Well 14 is in the western

1 edge of JPL, more or less in the southwestern
2 corner, what we consider to be a reasonably
3 upgradient well. You can see the Stiff diagrams are
4 pretty distinctive, similarly shaped. Not
5 identical, but fairly similarly shaped. And these
6 are from the two sampling events that we completed
7 for the RI work.

8 The next one that I'll look at is for
9 MW-7. MW-7 is our most historically contaminated
10 well. It is by far the most nasty. Little odd
11 shapes up here. But as we get down in this area,
12 it's a pretty consistent shape. Minor
13 perturbations, but a very distinctive situation in
14 terms of the relative concentrations of ions and
15 cations.

16 Now, that made some sense to us, because
17 when you look at the Stiff diagram for MW-1, which
18 is very close by, it's very similar. And so it
19 would make some sense to us that the source of water
20 at MW-1 is probably the same as at MW-7 for most
21 given scenarios. In other words, we've got a mound
22 out there that is apparently creating some kind of
23 flow and providing water toward MW-7.

24 Now, the one that appeared to be bizarre
25 to us was MW-10, which is at the southerlymost

1 portion of the Laboratory. When you looked at MW-10
2 you saw concentrations of TCE fluctuating up and
3 down. And we couldn't explain these fluctuations
4 until we began to look at the Stiff diagram for
5 MW-10 and compared that to the ones for MW-7 and
6 MW-14.

7 If you look at these, the MW-10 at this
8 particular time, which is December of '92, looks
9 fairly similar to MW-14's. At the next time, in
10 March '93, it looks a little more like MW-7's. Same
11 again for the next sampling event and the next.

12 This one appeared to be more 14 and less
13 7, but still not distinctly 14. This one appeared
14 to be very close to what appeared to be the cation
15 and ion concentrations for Well 14. So we thought,
16 well, based on the shifting of water and so forth,
17 there may be a consideration as far as something is
18 moving onto the site during reversals, and so forth.

19 Well, when we looked at this, we saw kind
20 of an interesting situation and we tried to plot it
21 on this graph. Naturally, the colors look beautiful
22 on the paper but don't come out very well on the
23 overhead.

24 What I did here, and this was originally
25 done by Foster Wheeler, what I did here is I took

1 the colors across the bottom to indicate the two
2 different water types. Now, the one in red or
3 maroon is the water type that we associate with
4 MW-14.

5 The yellow is the one that we associate
6 with the water types for MW-1 and MW-7.

7 Now, when the water types match the ones
8 for MW-7, the concentration, this is total VOCs --
9 we didn't want to try to restrict this. We looked
10 at the total VOC content. They were dramatically
11 less than when the water type matched the upgradient
12 type. And because of that we began to think, well,
13 wait a minute, there might be some kind of an
14 influence going on here off site that depending on
15 the nature of the flow regime at a given time, we
16 would actually end up with some form of an outside
17 plume, possibly, impinging on the Laboratory or
18 something else. This was our initial thought.

19 BISHOP: Chuck, is this for a specific well, or
20 is this for a total of all wells?

21 BURIL: That is for well MW-10. I'm sorry. If
22 that's not on there, that is for well MW-10.

23 ROBLES: MW-10 is right here. It's at the
24 southern portion of the Lab.

25 BURIL: Now, one of the other things I'll point

1 out is that the concentrations here at MW-5 and 4
2 are lower than at MW-10.

3 In fact, I don't recall which one, Mark,
4 but one of them was deeper than concentrations at
5 MW-10. Is that right?

6 CUTLER: 4. The second screen of 4.

7 BURIL: The second screen here we actually had a
8 contamination at a level that was deeper than was
9 sampled by MW-10. So it begins to look at those
10 there is some kind of influence, and we don't really
11 understand what that influence might be at this
12 point, but we think it might be associated with an
13 off-site activity. We don't know.

14 In trying to understand that, what we came
15 to was basically what we have in front of us today,
16 and that was some future site investigative efforts.
17 Now, some of these efforts were based on suggestions
18 from the regulatory folks. In fact, I'd say that a
19 good portion of these in concert with the RPMs were
20 more or less a mutual thought. But we're talking
21 about three additional multi-port wells.

22 Let me throw a map on there. You can
23 refer back to this text one as we go along, but
24 we're talking about three additional multi-port
25 wells. While they don't show up very well on the

1 viewgraph, hopefully you can find them here.
2 They're located here and another one located --

3 ROBLES: Right there.

4 BURIL: No. That's a boring.

5 There's one here. And then the last one
6 is essentially right in the center of the
7 contaminant area we're concerned with.

8 ROBLES: One, two, three.

9 BURIL: Three additional multi-port wells.

10 Now, the reason for those is a variety of
11 things. First of all, the one that's in the area of
12 the highest contamination, one of the concerns that
13 was voiced is that we may not know the actual
14 vertical extent of contamination. The wells that we
15 have in that area are standpipe wells. They're only
16 monitoring the upper portion of the aquifer.
17 Because of that we may be in a situation of having
18 contamination that's deeper and we won't know unless
19 we go look.

20 So we're looking at installing a
21 multi-port well at that location, and I've given
22 some of the basics behind that. We can switch back
23 and forth.

24 That particular well is MW-24, isn't it,
25 Mark?

1 CUTLER: 24.

2 BURIL: We're planning on drilling that one. I
3 didn't get the details on this, but, Mark, can you
4 refresh our memories on the details of construction
5 of 24 in terms of depth and so forth?

6 CUTLER: It's proposed to be 750 feet with five
7 screens, five individual screens in the multi-port.

8 BURIL: We are hopeful that that will be deep
9 enough to take us to whatever depth of contamination
10 there is there. Bedrock at that particular point,
11 based on the geology of the area, appears to be in
12 excess of 1,000 feet deep. I can't explain the
13 geology very well, but my understanding is it has
14 something to do with the angle of the fault plane
15 and the way that the sediments are resting on the
16 bedrock.

17 SCHUTZ: I have a question for you. How long
18 would it take you to install it like at 750 feet
19 with five screens?

20 CUTLER: Do you want to get into that now?

21 SCHUTZ: I'm just curious.

22 BURIL: We've got that broken down on the
23 records.

24 ANDERSON: Could you repeat again what the
25 objective is of these three new wells?

1 BURIL: The objective of this particular one
2 we're discussing now is to identify the depth of
3 contamination after --

4 ROBLES: Vertical extent.

5 CUTLER: That's in MW-22. That's in MW-24.

6 BURIL: Is it? Okay. I'm sorry. There's only
7 shallow wells for the hottest part.

8 BURIL: Again, the location for this first well
9 we're talking about is right here.

10 ROBLES: We have shallow wells all through here.

11 MELCHIOR: 22 is in the center part near 7 and
12 14.

13 BURIL: The next well I'll talk about is located
14 here.

15 ROBLES: 23.

16 BURIL: Our concern here is we have an area of
17 high contamination here and our next well is all the
18 way out in this area here, in the far western
19 region. This is a pretty good distance in terms of
20 trying to understand what we're dealing with as far
21 as where the actual contaminant plume is. What
22 we've done is plan to install a multi-port well,
23 which essentially splits the difference. It gives
24 us the data point to try and understand where that
25 contaminant plume may lie. This gives us some

1 information as far as the characterization of the
2 plumes but also provides us a valuable data point in
3 terms of feasibility study from a standpoint of the
4 sizes of any kind of remedial system that we may end
5 up having to put into place.

6 It would seem fairly obvious to me if
7 you're going to be treating in this area, making an
8 assumption at this point, if you needed to treat all
9 the way out to here to be sure, it could be quite a
10 bit different than if you only treated to here or
11 maybe in some point in between.

12 The last of these is located down here.
13 And this one is located with an eye toward not only
14 trying to get a better understanding of the
15 contaminant plume on the property, but also with a
16 desire of trying to determine whether or not we've
17 got a problem with an outside influence coming on
18 Lab or a southerly component of flow that we
19 currently don't understand that may be carrying
20 contaminants off Lab through that area.

21 So it's hopeful that this particular well
22 will provide us a number of pieces of information in
23 terms of what influences there are that may drive
24 contaminants off site or what influences there are
25 that may push contaminants on site and that we

1 actually end up seeing at MW-10. That question is
2 open right now. We don't know what it's going to
3 tell us. We're hopeful that it will provide that
4 information to us.

5 The next portion of the work that we're
6 talking about revolves around soil vapor and soil
7 vapor wells. Now, Peter pointed out that I have one
8 more viewgraph here. If anyone is interested, I can
9 go through this. This is how we made the
10 determination of the depth for the individual wells.
11 We have two of these on here, Well MW-22 and Well
12 MW-23.

13 Essentially what we did is we took the
14 bottom of the screen at 7 and the bottom of the
15 screen at 14, drew a straight line and where the
16 location of MW-22 intersected that line, that's
17 where we said total depth should be. So we assume
18 hopefully the bottom of the Well 7 is clean, but we
19 don't know yet. But that's our best data point now.

20 The bottom of Well 14 is clean. So by
21 drawing that line it gives us at least a data point
22 to be able to know we should at least drill that
23 deep.

24 Same kind of thing with Well 23, only
25 rather than using Well 7 we use Well 16 and Well 4,

1 with Well 4 being clean and Well 16 the bottom of
2 that hopefully being out of the contamination.

3 Going back to --

4 NIOU: Chuck, I remember that 22, that that
5 depth will be 750 feet?

6 CUTLER: 24 is 750. The other two are actually
7 going to be 500 feet to cover this depth here.

8 NIOU: 22 is the one within the 7, 16?

9 ROBLES: Yes. Vertical extent.

10 NIOU: Vertical extent. That's 22.

11 BURIL: Now I'm confused. I think it's 24.

12 MELCHIOR: According to your --

13 CUTLER: According to the write-up it's okay.

14 It says 22 and 23 being around 11-4-90, 1455. And
15 then hole 24, there's no depth given, but that's the
16 one that is going to be 750 feet.

17 NIOU: 750. That's the one, the hot area.

18 BURIL: Yes. 22, then, is the one between 7 and
19 14. That's the one that goes behind Building 180.

20 The one between 16 and 10 is the one that goes
21 behind the spacecraft assembly facility. Then 24 is
22 the one that's located right in the middle of
23 everything. That's the one that goes to depth.

24 NIOU: Okay.

25 BURIL: That's okay. I get them confused, too,

1 and I'm supposed to be running this thing.

2 The next series of work we're talking
3 about was actually expressed as a concern by, I
4 think it was Jon that expressed a concern initially,
5 and that was that we actually found at that boring
6 16 that I indicated earlier, that there was a fairly
7 significant potential for vapor contamination to be
8 a problem. So what we're talking about is
9 installing three wells in the area immediately
10 around Well 16 and one, quite literally, as close as
11 we could possibly put it next to Well 16.

12 The reason for that is Well 16 only goes
13 down to approximately 100 feet, and there's about
14 another 100 feet down to groundwater. So that last
15 100 feet, and with the concentrations increasing
16 with depth, there's concern that we may have a
17 problem there.

18 The other ones are placed with a hope to
19 basically home in on that general area.

20 Those four borings are on the locations,
21 and we're doing the volatile and nonvolatile
22 analysis.

23 There's three additional soil borings.
24 Pete, if you'll throw that up on there. These were
25 things that were identified by Penny, I think it

1 was. And these are looking back at some concerns
2 that were identified in aerial photo survey. I
3 think, Michelle, you provided that to us way back
4 when. This is just doublechecking, since these were
5 not identified during our historical search, as one
6 of the things that we needed to look at. These were
7 things that were outside of our historical search
8 with that well. They've been identified and
9 certainly there is a potential for concern. So,
10 therefore, we think we do need to go ahead and
11 evaluate these things to make sure we don't have a
12 problem. Those are identified there.

13 The last thing that we have was a concern
14 brought by Penny regarding the potential for
15 contaminants being in the Arroyo Seco associated
16 with the JPL facility. Because of the nature of the
17 Arroyo being such a dynamic place and also our own
18 discharges over time and so forth, we were only able
19 to come up with two locations in the Arroyo itself
20 where we're planning to go out quite literally with
21 a backhoe and dig a trench down to a depth and
22 sample in those areas. It's unfortunate I couldn't
23 bring a picture along with me. It's as close to an
24 earthbound view of a moonscape as I can imagine. We
25 test our Mars rovers out there because the area

1 resembles Mars in large part.

2 ANDERSON: So is the purpose of the trenches,
3 then, this idea of seeing whether there were
4 conduits from your site into the Arroyo?

5 BURIL: Whether there was a potential for runoff
6 from the site to have carried contaminants into the
7 Arroyo.

8 A couple things that I'll mention here
9 just as another point of interest before we get into
10 the scheduling. I think maybe we might take a break
11 after this one and then we can put up the schedule
12 and we can start talking about those.

13 One of the things I'd like to remind
14 everybody of is that we do have upgradient public
15 supply wells contaminated with PCE and TCE. PCE is
16 not present at the JPL site in significant
17 concentrations. I encourage you to take an
18 opportunity to look back at the data and you can
19 verify that for yourself.

20 La Canada is a non-sewered community in
21 many areas. Most of the new ones have sewers, but
22 the older ones didn't, and it was common practice to
23 clean those pipes by pouring solvents down them.
24 And based on our own understanding of the area, the
25 other discharges appear to be likely.

1 Then last, the public wells downgradient
2 from JPL are already being treated to eliminate the
3 immediate risk to the people who use those wells as
4 drinking water. That includes both City of Pasadena
5 wells and Lincoln Avenue wells.

6 That, in our minds, essentially eliminates
7 the risk that might be posed by serving this water
8 to people. And because of that, we think it could
9 even be looked at in terms of a potential interim
10 remedial action at this point, at least in terms of
11 being able to protect the public health.

12 And with that --

13 ANDERSON: Can I ask you couple questions before
14 you break?

15 BURIL: Certainly.

16 ANDERSON: Because my time is going to be
17 limited, unfortunately, this afternoon. So I may
18 not be able to stay past about noon.

19 What is the cost to date you've spent in
20 this first investigative stage?

21 BURIL: From start to finish to this point in
22 time, just under \$9 million.

23 ANDERSON: \$9 million. And for the next phase
24 coming up you've just outlined for us, about how
25 much?

1 BURIL: We'll be looking at, Mark, about two and
2 a half?

3 CUTLER: Including all the reports and
4 everything, I think we're closer to three and a
5 half. There's quarterly monitoring.

6 BURIL: Yes. I didn't include that. There's
7 close to, what, \$800,000 a year for quarterly
8 monitoring?

9 ROBLES: Why don't you tell her how much the
10 Jacobs estimate was for the whole project.

11 BURIL: Just as another data point, Jacobs
12 Engineering, with Foster Wheeler's predecessor
13 company, Ebasco Environmental, did a cost estimate
14 back in 1991. Based on what appear to be some
15 pretty good assumptions based on the current data,
16 they gave a total project cost in escalated dollars
17 of about \$104 million.

18 ANDERSON: That's through remedial action.

19 BURIL: That's through remedial action. That's
20 correct.

21 ANDERSON: So about \$12 million, you expect in
22 the investigation and you're hoping, I guess, that
23 after this phase --

24 BURIL: We're hoping this will be it. We still
25 have another round of data coming from our Operable

1 Unit 3 wells. We don't know what that's going to
2 tell us yet. We haven't gotten anything back on
3 that yet that gives us any concrete information.
4 All I can say is I hope it comes out looking like it
5 does already. Because if it does, we may have less
6 of a problem out there to deal with. If it comes
7 back differently, then we don't know. It really
8 depends.

9 ANDERSON: In terms of remedial action to date,
10 you're talking about the wellhead treatment that you
11 supplied so far?

12 BURIL: That's correct.

13 ANDERSON: What's been the approximate cost of
14 that?

15 BURIL: The approximate cost for the Pasadena
16 wells, we had invested initial costs of about, I
17 want to say \$1.9 million. There are operating costs
18 annually that range in the half million dollar mark,
19 depending how often --

20 ROBLES: \$600,000. And we've paid it since --

21 BURIL: Well, since 1990, '91 time frame.

22 ANDERSON: And you're still in negotiations.

23 BURIL: We're still paying that to the City of
24 Pasadena. That agreement is in place, is rock solid
25 and we continue to do so until such time as we

1 determine it is not necessary anymore.

2 We are still in negotiations with Lincoln
3 Avenue Water Company as far as what participation we
4 might have with their concerns. Their costs right
5 now to date are in the neighborhood of
6 three-quarters of a million dollars. And then their
7 continuing costs are probably in the neighborhood of
8 \$100,000.

9 ANDERSON: Are you getting the same kind of
10 pressure that DOD and DOE are to limit your
11 investigative costs and move into more RA?

12 BURIL: We'd like to do that, yes.

13 ROBLES: Yes and no. But it is not to the
14 extent as DOD is going through.

15 ANDERSON: You're not getting caps on study?

16 ROBLES: No.

17 BURIL: No, we have not received that yet.

18 ROBLES: We're very small. The whole NASA
19 agency is \$13.8 billion. It's not \$300 billion as
20 the DOD. We are probably the biggest Superfund site
21 in the agency. So we get the priority. But we're
22 not seeing the monies or spending the monies.

23 I talk with the Air Force contractors and
24 I tell them, "Well, I may get you a million here,"
25 "Oh, that's small potatoes. We want 15 million,"

1 you know, big dollars. So we're very small. We're
2 tied into, as DOD, the Congressional. But we're
3 also tied into our budget, which we're a very small
4 agency compared to the DOD. We may not have a large
5 line item for Superfund like DOD does.

6 BURIL: Just another anecdotal data point, JPL
7 was NASA's first Superfund site. We were the first
8 one to hit the NPL. We are on the point of the
9 spear in a lot of regards as far as how NASA as an
10 agency is likely to try and handle things in the
11 future. We were the model for Langley and also for
12 Marshall, I believe, in how things came about.

13 ANDERSON: Your presentation has been very
14 impressive, very thorough.

15 BURIL: I hope it was helpful. These guys all
16 know it.

17 ANDERSON: I'm frankly appalled that I haven't
18 sat through this once before, considering we've been
19 in business with you now for several years.

20 But I really appreciate having gotten this
21 opening. I will come back after you guys break for
22 a little bit, but then I'm going to have to exit,
23 unfortunately. I'll leave you in Debbie's and
24 Greg's hands. They'll be here for the rest of the
25 afternoon.

1 ROBLES: Why don't we take a break.

2 (A recess was taken from
3 11:04 A.M. to 11:20 A.M.)

4 BURIL: Let me explain all the stuff we stuck on
5 the walls here. The one back here is exactly the
6 same schedule as you all received already. That
7 combines Operable Units 1, 2 and 3, basically the
8 entire project, with all the monitoring program
9 that's built into this throughout the course of the
10 time that's shown there. It also is color coded to
11 show the Operable Unit 1 and 3 combined work in blue
12 and the Operable Unit 2 work in brown.

13 The purple at the very beginning are
14 summary tasks that basically cover everything on the
15 project. I think the only ones that are in purple
16 there are contractual requirements. That covers all
17 three operable units.

18 Now, these over here are a little
19 different. These actually break down the individual
20 portions of the project by operable unit. Now, we
21 kept Operable Units 1 and 3 together. We've got a
22 color coding here and it's stuck back in your
23 presentation there a couple more sheets.

24 On the individual operable unit schedules,
25 and unfortunately these colors do not show very well

1 on the overhead, hopefully they're better in your --

2 ROBLES: Yes. They show color.

3 BURIL: All right. Good.

4 What we did is we tried to break these
5 things down according to categories of tasks.

6 ROBLES: Regulatory driven.

7 BURIL: Regulatory versus contractual versus FFA
8 versus whatever. Let me explain the colors.

9 The green that you see on these two
10 schedules at the summary task level, which is where
11 the green bar is, those are viewed as critical path
12 tasks. In other words, everything under that green
13 heading is a task that would be part of the critical
14 path. So those are things that basically have to be
15 completed in that order in order to keep the project
16 moving.

17 The red are things that are mandated
18 either by the FFA or by the CERCLA or other
19 considerations.

20 And I've got those on viewgraph so we can
21 put those up here, too. You have the schedules, the
22 actual writing part of it. Those are in your
23 handout in the back here a ways. So you can take a
24 look at those and try to stay abreast of the colors.

25 LOWE: What do you mean mandated by the FFA?

1 BURIL: For example, agency review time for a
2 draft document, 60 days. That would be in red under
3 one of these document summary tasks.

4 The blue are things that are mandated to
5 JPL/NASA in terms of contractual obligations.
6 They're shown in blue here on both schedules.

7 The purple are things that are granted to
8 NASA/JPL through the FFA. They're basically review
9 times that are established in the FFA, like review
10 times for draft-final document, 60 days. And that's
11 broken out in purple there.

12 LOWE: I thought draft-final documents have a
13 30-day review.

14 BURIL: Yes, they do. Excuse me.

15 BAKER: Is this time to incorporate comments or
16 to review, you're saying?

17 BURIL: Basically whatever the FFA said. When
18 we get the comments back we've got essentially -- I
19 thought to develop a draft-final it was 60 and 30
20 days to go --

21 SCHUTZ: You have 60 to develop the draft-final
22 and the agencies get the draft-final and have 30
23 days.

24 BURIL: 30 to go from there.

25 SCHUTZ: And then if they have any -- if

1 comments weren't incorporated or not incorporated
2 adequately then you have 30 days to resolve that or
3 you could potentially go to dispute.

4 BURIL: Right.

5 BAKER: I don't think that's on these.

6 BURIL: We don't have the part about going to
7 dispute on these.

8 SCHUTZ: No. The 30 days. You probably have
9 the 60-60, 30-30.

10 BURIL: Yes.

11 SCHUTZ: That's part of it.

12 BURIL: The black on both of these is
13 essentially everything else.

14 MELCHIOR: That's field work, et cetera.

15 BURIL: That's field work. That's development
16 time for reports. That's everything else.

17 Again, we can walk through these things.
18 What my hope was to actually take each one of these
19 individual schedules, and they're included in your
20 handouts there. What I'd like to do is to walk
21 through each one of these tasks and identify where
22 you may have a concern, whether it's something that
23 you feel is too long, not long enough, whatever the
24 concern might be, so we can hopefully come to
25 agreement on tasks or group of tasks that are not a

1 concern versus ones that we need to talk about in
2 more depth tomorrow or later today.

3 ROBLES: Before we do that, you will go into
4 performances?

5 BURIL: Right. Now, one of the things I wanted
6 to lay out for you first before we got into actually
7 breaking down the tasks, was to give you some idea
8 of how we came up with some of the time frames that
9 are in black. So what I'm going to lay out here for
10 you is some of the information that we had -- I'm
11 not sure I've got it in --

12 SCHUTZ: Chuck, I'm sorry. What was black
13 again?

14 BURIL: Black are basically anything that's not
15 mandated in some fashion.

16 ROBLES: Contractually or regulatory.

17 BURIL: Contractually or regulatory or by
18 agreement through the RPMs, we said we would wait
19 this long between sample periods, that type of
20 thing.

21 I hope I got this out in the right order.
22 I pulled them out and I now realized I mixed them
23 up. Let me show you what I've got to start with.

24 What I've got here are the periods of
25 performance for the various wells that we've already

1 installed, deep aquifer wells.

2 NIOU: Is that in this?

3 BURIL: Yes. It should be. It should be right
4 behind the --

5 (Discussion held outside the record.)

6 BURIL: What we've done here is we've taken our
7 experience from JPL and we've compiled the best and
8 the worst scenarios that we encountered during the
9 course of installing the wells we have. We have
10 broken it out by individual tasks under a total task
11 there. In the best case, we look at the
12 mobilization time, the setting the conductor
13 casings, which is the first step in construction.
14 The drilling to 750 feet. We took and prorated all
15 the wells we did thus far and looked for the best
16 and worst cases that would give us an indication for
17 750 feet, time to install the four-inch casing and
18 developing and installing the West Bay systems and
19 then developing that, to give us a point in time
20 when we would actually get to the sampling of the
21 well.

22 Our best case was, and unfortunately --

23 ROBLES: 35 days.

24 BURIL: Thank you. -- was 35 days from the
25 point in time where we actually got the rig to the

1 time that we were actually physically ready to
2 sample the well.

3 ROBLES: These are workdays or calendar days?

4 BURIL: These are workdays or calendar days,
5 Mark?

6 CUTLER: Workdays, to correspond with your other
7 schedules.

8 BURIL: That is a good point.

9 Let me make sure everyone understands the
10 numbers that are on these schedules. When it says
11 "Duration" in this column, these are working days.
12 These are not calendar days. It takes into account
13 that working days do not include weekends and do not
14 include holidays.

15 The actual dates that are shown here are
16 attempts to show that we complied with mandated
17 requirements for calendar days. So some of these
18 dates have been kind of massaged a little bit to get
19 them into, say, a 60-day time frame as best we
20 could.

21 SCHUTZ: So your 60-day review times, that's
22 calendars days, not workdays?

23 BURIL: Right. Workdays it's actually numbered
24 as 45.

25 LOWE: Does that mean you would never be doing

1 field work on a weekend?

2 BURIL: No, not necessarily. But this is how we
3 scheduled it because otherwise we're going to be
4 talking about tremendous cost in terms of overtime
5 and everything else. So we scheduled it for a
6 normal workweek.

7 But what we're talking about, too, is in
8 this kind of work we're talking about 10-hour days.
9 Right?

10 CUTLER: At least. If things are slowing down
11 or hitting rocks, we work through weekends to make
12 it on schedule.

13 RANDOLPH: Talking about groundwater wells, when
14 it comes to these other types of borings, we can
15 only work on weekends most of the time. We
16 basically try to work on a 10-day on and 4-day off
17 basis. So it's essentially two weeks, 10 working
18 days, 14 calendar days.

19 BURIL: This gives you the best case as being 35
20 days. Our worst case is 83 days. You can see the
21 kinds of things that we ran into trouble on in
22 developing the 4-inch casing at MW-12.

23 ROBLES: MW-12 was 11 days.

24 BURIL: We also had problems with the west bay
25 casing. So we try to give you the range of

1 information there that we were looking to.

2 BISHOP: So you developed the casing for 35 days
3 straight?

4 CUTLER: We pulled out over 90,000 gallons of
5 water out of that well.

6 BISHOP: And you couldn't get the silt down.

7 MELCHIOR: Couldn't get the silt down.

8 CUTLER: Every attempt to try to get the five
9 NTUs, when we sampled we were successful I think on
10 most screens. The bottom one may be --

11 BURIL: The bottom ones just bounced around at
12 10 and so forth. That was a worst case example,
13 obviously. We were in a finer grain sediment at the
14 point of the formation. And it took more time.
15 There was just no way to get around it.

16 CUTLER: This is five screens, too. Five wells
17 in one. A 4-inch casing.

18 BISHOP: Oh, you're doing each individual one.

19 BURIL: Each individual screen in the --

20 CUTLER: It's five screens and then we installed
21 the west bay and we developed those five sampling
22 ports as well in all those places.

23 ROBLES: So that gives you an idea.

24 BURIL: Then what we've got is the next thing
25 for the soil vapor wells.

1 LOWE: Actually, before we move on, so if this
2 is the best case scenario and this is the worst case
3 scenario, how many days did you build into your
4 schedule?

5 BURIL: We basically tried to split it down the
6 middle. Not the best case; not the worst case.

7 CUTLER: I think 50 days is on this schedule.

8 ROBLES: If we beat that we'll go faster. If we
9 don't, we've got problems.

10 CUTLER: Exactly.

11 BURIL: We've got a problem and we'll have to
12 try to make it up and do something else. We don't
13 know.

14 LOWE: Okay.

15 BURIL: The next one is the estimated periods
16 for performance for drilling based on past
17 experience. This is for the soil work, the soil
18 borings. Now, again, we broke it down by task to
19 show you which things can be exceedingly drawn out
20 and which ones are pretty common as far as keeping
21 them on schedule.

22 Our best case is -- is it 39 days, B.G.?

23 RANDOLPH: Yes.

24 ROBLES: 39. Right.

25 BURIL: This is talking about drilling all four

1 vapor wells. Correct?

2 RANDOLPH: Right.

3 BURIL: So we're talking about taking our best
4 case of drilling four vapor wells in the conditions
5 we have at JPL and that's 39 days long. Our worst
6 case in doing the same thing is 66 days long. You
7 can see the differences that happen and the various
8 things. Mobilizing the drill has turned out to be a
9 problem at one situation. The actual drilling,
10 depending upon the conditions we run into, can be
11 very protracted.

12 NIOU: What are the depths of these five?

13 BURIL: Those are over 100 feet, Steven.

14 NIOU: Over 100 feet.

15 ROBLES: If you look at the bottom it will say
16 that.

17 BURIL: So what we did with these is, again, we
18 tried to prorated them up to talk about going down to
19 the actual groundwater level and split the
20 difference between the best and the worst case as
21 best we could.

22 LOWE: I'm not really understanding why all of
23 these things are spread apart.

24 BURIL: What we're trying to do here basically
25 is to show you a best case in terms of how long it

1 takes us versus a worst case and how long it takes
2 us. Maybe I'm not sure I understand your question.

3 LOWE: I just don't understand the sequence of
4 events here. You move your driller for 15 days and
5 then what's the difference between the next two
6 lines? What's previous and --

7 RANDOLPH: Debbie, what this amounts to is a
8 mobilized driller, from the day we were notified we
9 were able to start work it took 15 days before that
10 drill rig could get on site.

11 LOWE: Right. I understand what that is. I
12 guess I'm not understanding the following lines.

13 RANDOLPH: If you recall, our deep borings here
14 are going to 200 to 240 feet deep on these new
15 wells. We have no experience out there beyond 100
16 feet. So we gave you what our best was for four
17 days at the 100-foot depth for which we have
18 experience.

19 BURIL: So the first line there, the previous
20 100-foot soil vapor wells, our best experience was
21 eight days to get four of those in. Right, B.G.?

22 RANDOLPH: Right. Now, our deep soil vapor
23 wells, which are going to be 200 to 240 feet deep,
24 we're extrapolating our 100-foot experience out to
25 the depth of the new wells. We figure it's going to

1 take that long.

2 LOWE: Okay.

3 BURIL: That tells you what our experience was
4 and what we extrapolated to.

5 BISHOP: You're more than doubling the amount of
6 time to go from 100 feet to 200 feet.

7 RANDOLPH: Right.

8 BURIL: Actually it's more like 250, isn't it,
9 B.G.?

10 RANDOLPH: Yes. A good two and a half. And we
11 use the two and a half multiplier for both the worst
12 and the best.

13 NIOU: How about the mobilization time? Is that
14 the same?

15 RANDOLPH: No, it's not. Our previous
16 experience for the pre-RI drilling was 27 days
17 because of contractual problems.

18 BURIL: But when we actually scheduled this we
19 were talking about trying to split the difference.
20 Right?

21 ROBLES: Right.

22 RANDOLPH: Right now the schedule up there is
23 basically 15 days.

24 BURIL: So we're taking a very positive attitude
25 toward these guys.

1 RANDOLPH: Yes.

2 BURIL: Okay. The next one that we put up is
3 we're trying to give you some idea of how long it
4 took to do the other reports that we've generated
5 thus far for the project. I think it's fairly
6 self-explanatory. You look at the various types of
7 reports and the development time itself. This is
8 purely to develop it. It's not for a review or
9 incorporating comments or anything else. It's just
10 to develop these documents.

11 Without going through each one
12 individually, one of the things that I'll point out
13 is that most of these reports, with the exception of
14 the expanded site investigation report, are
15 basically just telling you what it is we plan to do.
16 It really doesn't offer any kind of insight or
17 analysis into any data. So we anticipate that the
18 reports that we generate as RI reports and FS
19 reports, and so forth, are going to be quite a bit
20 more complex because we're going to be taking a
21 great deal more data and analyzing and drawing
22 conclusions from that, where all our previous
23 reports have simply been telling you what we plan to
24 do.

25 So that's why giving you some idea what it

1 is that we've done in the past, when we start
2 looking at the individual report development times
3 you'll see that these are going to be longer. And
4 that's the explanation for that.

5 Then the last one, which I don't think
6 really has too much bearing on the total project,
7 but which I want to point out, is the time frames
8 that it takes for the scheduled quarterly sampling
9 events.

10 Basically, this is typical time. This is
11 an overall average, as I recall you saying, Mark, of
12 the times it takes to actually get a quarterly
13 sample event done, which is why they've been
14 scheduled out the way they have in the master
15 schedule.

16 BISHOP: This is just the field work; correct?

17 RANDOLPH: Yes.

18 BURIL: It doesn't count the report preparation
19 and so forth.

20 Julie, for your benefit, what I'd like
21 to --

22 ANDERSON: Don't repeat, please.

23 BURIL: Don't repeat?

24 ANDERSON: Not for me.

25 BURIL: Okay.

1 ANDERSON: I wouldn't want to do that for
2 anybody --

3 BURIL: If you have a questions, please feel
4 free to pop in.

5 ROBLES: What we just showed, Julie, is what the
6 average takes for certain tasks.

7 ANDERSON: That's what Greg was telling me.

8 ROBLES: So that way we could get a feel. When
9 you see the schedule you're not thinking we're
10 blowing smoke, so you understand where we're coming
11 from.

12 BAKER: How about the period of time from sample
13 collection to data validation? Do you have any --

14 BURIL: From the actual sample -- you mean the
15 end of the sample collection to the actual data
16 validation completion?

17 BAKER: To where the data is ready to
18 incorporate into your report.

19 BURIL: Let me turn around and double check.
20 We're looking at approximately a month. In fact,
21 we're talking about actually completing the data
22 validation after the report has actually been
23 submitted simply because if there's a problem, then
24 we'll go back and figure it out. But at least this
25 way the reports are coming in more or less on a

1 quarterly basis without having some kind of delay
2 being factored in.

3 SCHUTZ: I'm sorry. You're not going to
4 validate your data until after you submit the
5 reports to the agencies?

6 BURIL: They're going to be in validation during
7 the time we actually submit the data, submit the
8 report.

9 ROBLES: Concurrent.

10 BURIL: In other words, the data will be
11 validated while the report is in the agency's hands
12 being reviewed. In other words, it's going to be
13 starting at a certain point in time before it's
14 reported and --

15 CUTLER: These are the quarterly monitoring
16 reports.

17 SCHUTZ: Not the RI?

18 BURIL: Oh, no. This is the quarterly. It's
19 not the RI report. All the RI work is going to be
20 validated prior to being incorporated.

21 SCHUTZ: Just out of curiosity, why would you
22 want to do that?

23 ROBLES: Time.

24 BURIL: It's time. That's only trying to save
25 time. That's all.

1 CUTLER: The next quarterly sampling event will
2 start. If we waited for the data validation to get
3 a report in your hands for the previous quarter,
4 we're sampling and you still haven't received any
5 data from the first quarter.

6 Does that make sense?

7 MELCHIOR: Because it takes more than three
8 months to get the coordinated data back in
9 validation.

10 CUTLER: At the last RPM meeting everybody
11 pretty much agreed, okay, we can see quarterly
12 reports with unvalidated data so we can get them in
13 a timely manner, then the annual report will contain
14 all the validated data.

15 BURIL: If there's any issues that may arise as
16 a result, we can go back to the individual quarterly
17 reports or discuss it in the annual.

18 What I'd like to do, then, is to ask you
19 all to start with Operable Units 1 and 3. I have
20 the summary schedule as the first one. It's 15
21 pages back.

22 ROBLES: It's in the back.

23 BURIL: But it should be titled Operable Units 1
24 and 3 Schedule.

25 LOWE: It's not the 1, 2 and 3?

1 BURIL: No. I was going to take this by
2 operable unit and try and break it up a little bit.
3 Let's start with 1 and 3. That's the longest.

4 BAKER: 1 and 3 only?

5 BURIL: Yes.

6 Again, even though the colors don't show
7 very well in here, what I thought we'd do is I would
8 propose that I just stand here on the chart and mark
9 these as either green or red. Green meaning that
10 there's no concern. Red meaning that there may be a
11 concern and that we may want to come back and
12 discuss that.

13 But my thought is that we would go through
14 essentially the entire schedule and identify those
15 things that we agree that we need not be concerned
16 with versus the ones that we might want to talk
17 about. And then at that point in time we could then
18 come back and look at the ones we want to talk
19 about. Because one that we may want to talk about
20 early in the project may have dramatic impact on
21 subsequent ones, which is why I'd like to try and
22 identify all of them in essentially one shot so we
23 know what we're talking about and what the
24 interactions might happen to be.

25 Does that sound reasonable to everybody?

1 BAKER: That's a good start.

2 LOWE: One thing that people should think about
3 is it's a quarter to 12:00. I don't know if people
4 want to go through to 12:30 and then take lunch or
5 take lunch sooner.

6 BURIL: We're open. Let me suggest. Why don't
7 we at least start and see how the process works.
8 Then we might just suspend it and then go on from
9 there, have lunch and then go on.

10 I'll leave this up there. If anyone wants
11 me to put the actual schedule up on the overhead, I
12 can do that. But hopefully you can follow along in
13 your handouts.

14 LOWE: I know Julie is going to leave in a few
15 minutes. I was wondering if you wanted to talk
16 about what we were talking about earlier.

17 ANDERSON: Yes. The only thing I would suggest
18 after having heard what was a very excellent summary
19 coming in, is that given the cost of the work to
20 date and the cost of what's coming, it might be a
21 good idea to think about doing some more early
22 remedial action in this phase rather than
23 necessarily waiting until whatever the negotiated
24 schedule extension is for finishing this phase 2
25 work before you start thinking of doing some sort of

1 remedial action.

2 And I'm not talking about, you know, it
3 doesn't have to be major, but some sort of source
4 control, hot spot removal, soil vapor extraction,
5 something like that that might benefit the plume.

6 BURIL: In fact, Julie, that's what we had
7 anticipated trying to do. For example, in Operable
8 Unit 2, the work we're talking about doing with the
9 four additional soil vapor wells were actually being
10 put in there not only to finish characterizing the
11 plume but also give us enough information to
12 possibly do an EECA. Depending upon what we
13 ultimately come up with there, there is a very real
14 possibility in our minds we may want to do something
15 like that. But without having better information
16 available to us it's really too early to make a
17 determination as to whether it's a feasible
18 situation to deal with.

19 ROBLES: NASA's policy is to try to go to EECAs
20 as fast as possible.

21 ANDERSON: Right. We're hearing that from
22 everybody. We certainly support that; getting into
23 early removal actions whenever you can.

24 ROBLES: Try to remove the health risk as fast
25 as possible and then deal with the issue of

1 contamination. But it's the health risk issue
2 that's the biggest concern.

3 ANDERSON: The work you're doing sounds
4 excellent. I wouldn't want to appear to be
5 criticizing the cost or whatever because, frankly,
6 I've seen much higher costs for the amount of work
7 that you've performed so far.

8 BURIL: So have we.

9 ANDERSON: I think what we could all end up
10 being on at some point down the road is the duration
11 of the project and where is the actual protection of
12 the remedial action, the wellhead treatment in there
13 that's removed the immediate risk. But there may
14 come the criticism that you could be doing better in
15 terms of actually mitigating the problem if you got
16 out some of that material rather than just waiting
17 and continuing to study.

18 If you could take a look at that and
19 discuss that a little bit during the course of your
20 stay, I would really appreciate it.

21 BURIL: I think that's very reasonable.

22 ROBLES: Fine. It's within our privy.

23 BAKER: Is the nature of the kinds of soil gas
24 investigation, those wells, can they be used for
25 extraction, or would you need to -- you've got to

1 take an action?

2 BURIL: We would actually have to build actual
3 extraction wells. These are purely for monitoring
4 purposes only. We don't know of a mechanism to
5 build a soil vapor well with a multi-port system
6 other than to have what's, in essence, akin to a
7 multiple completion of a ground water well with
8 individual casings in a given bore hole.

9 There are no vapor sampling mechanisms
10 that I'm aware of that are similar to the west bay
11 system that we do use for groundwater. So we're
12 stuck. We don't have a choice.

13 Well, do we want to start the process up
14 to lunchtime and then take a break?

15 ROBLES: Or do you want to break now?

16 BURIL: I'm here overnight so I don't care what
17 you do.

18 BISHOP: Maybe we can explain a couple of these
19 at the very beginning. That might help me
20 understand what the difference between the 5 through
21 10. Prepare amendments to work plan. JPL reviews.
22 Include JPL comments.

23 BURIL: This is the sequence that we have to go
24 through in order to prepare a document and
25 ultimately submit it to NASA and then ultimately to

1 the regulatory agencies.

2 The way that it's set up is, basically
3 Foster Wheeler generates a document. It's then
4 provided to JPL as their contracting person. We
5 review it and before we provide it to what is
6 essentially our client, NASA, we like to be able to
7 incorporate our comments in it, basically scrub this
8 thing as clean as we can get it. We then give it to
9 NASA, who in turn will review it at Peter's level,
10 and that will also go to headquarters, is my
11 understanding.

12 ROBLES: In certain instances it would.

13 BURIL: And then we take those comments, combine
14 those, incorporate those comments into the overall
15 document and then supply that to the agency.

16 SCHUTZ: Can I ask a question? I know that
17 that's your normal procedure and there's an extra
18 step in here with the relationship with the
19 contractor, JPL and NASA.

20 But is there any way that it might be
21 possible to do concurrent reviews between JPL and
22 NASA? Because you're adding 55 days just with your
23 addendums here.

24 BURIL: That's a real tough one for me only from
25 the standpoint that my executive management and my

1 lawyers are very loath to not review these things
2 before they go out. And I think --

3 BAKER: Even to NASA.

4 BURIL: Even to NASA. In all honesty, it
5 revolves around PRP issues.

6 ROBLES: Remember you asked that question about
7 PRP issues? That's the reason.

8 BURIL: It is, in all honesty, revolving around
9 the PRP issue. We want to know from Cal Tech's
10 perspective what's there. The data are going to
11 tell the story regardless. There is no way we can
12 change the data. It's going to be telling the
13 story.

14 Cal Tech likes to know what's going on,
15 and the way that the current thought process rolls
16 is that they want that opportunity to see it first.
17 And the way it was described to me by my executive
18 management is that we as NASA's contractors have the
19 right to be able to assure that our work product is
20 adequate, in our view, before we supply it to our
21 client.

22 ROBLES: It's also the contractual relationship
23 that we have. If we didn't have them, then that
24 step would be out. But because they have been
25 contracted to operate and manage this, as well as

1 the Superfund, it's their privy.

2 BURIL: I share the frustration, quite honestly,
3 Michelle. I would like to see something like that
4 happen. Certainly there is a lot of time built in
5 there. I recognize that. But without getting some
6 form of concurrence from my executive management, I
7 personally couldn't, at this point in time, offer
8 that up.

9 ANDERSON: Can we assist you in getting that?

10 BURIL: Well, I don't know.

11 ANDERSON: What we fought DOD and DOE real hard
12 on, frankly, is the same sort of review, do loops
13 over and over before we have a chance to --

14 BURIL: Could you explain that a little bit to
15 me? Maybe that might help me.

16 ANDERSON: They have the same sort of process of
17 feeling like they needed to go multiple layers of
18 review before they feel they could get the documents
19 out to us for our first glimpse at them. I mean,
20 just taking a look at this, we would not see this
21 until May 10th when the things were basically ready
22 by what? February. So you've got a couple extra
23 months in there.

24 ROBLES: Julie, the DOD would have get this,
25 that it went at the base level, then it went to

1 their command level.

2 ANDERSON: Went back to the Pentagon, they
3 reviewed it there and then it went up the chain.

4 BURIL: That sounds like the same daisy chain
5 we're in.

6 BAKER: Even within that, though, the base
7 would, say, use the Corps of Engineers as their
8 service contractor, but then has a prime contractor
9 and so the Corps has to see it before the base sees
10 it.

11 ROBLES: We go through the same thing when we
12 send monies to AFCEE. Because we take a cursory
13 look at it, AFCEE looks at it, then it gets to us
14 and it goes to the Air Force.

15 ANDERSON: We took a hard stance on this with
16 both of them in all of our reviews and we no longer
17 have that kind of do loop with either DOE or DOD.

18 BURIL: Let me get a question here because this
19 is something I know my management will ask me.

20 Your rationale for doing that was --

21 ANDERSON: Saving time.

22 BURIL: Saving time, making it a more effective
23 and more efficient process.

24 ANDERSON: Sure. If we could spot things right
25 away that would be problematic for us we'd rather

1 you know that at the beginning of the review process
2 rather than waiting until you've already been
3 through it for three months yourself.

4 SCHUTZ: Then if the agencies have major
5 comments it's going to go right back through that
6 wall.

7 BURIL: The same loop.

8 ANDERSON: That same loop.

9 SCHUTZ: And it's only a draft document. It's
10 not going out to the public.

11 BAKER: There has to be a recognition on our
12 part that it's that much more of a draft than what
13 we were getting before and that we have to keep that
14 in mind when we're looking at this thing, that it
15 isn't a polished, multiple-reviewed, peer-reviewed
16 kind of a document.

17 BURIL: Let me do this.

18 ROBLES: Put a red to it because it's a question
19 we need to ask.

20 BURIL: I will put red to it, yes. This is a
21 good point.

22 BISHOP: Another way to look at it would be if
23 any documents, when the agencies got them, they went
24 to EPA for their first review and went back, then
25 they went to DTSC and went back, and then went to

1 the Water Board or --

2 ANDERSON: If we did it sequentially you
3 wouldn't appreciate that.

4 BAKER: So is NASA headquarters in parallel with
5 your --

6 ROBLES: My office, yes. We've streamlined that
7 immensely. I don't send any things to NASA
8 headquarters for their review unless I have to. And
9 it's usually done concurrently. I get on the phone
10 and we do it right then and there. Usually it just
11 goes through me personally. So I've tried to
12 streamline the headquarters, because that is the
13 black hole. It's like the Pentagon.

14 ANDERSON: Think about that. If you need
15 something from us that can help apply some pressure
16 at the headquarters level, we can certainly do that.

17 BURIL: I certainly recognize the problem. It's
18 one that I'm not sure what kind of response I'm
19 going to get. I've asked this question before and
20 the legal beagles, if you will, basically said "Not
21 in your lifetime." So I don't know.

22 They were not aware and I was not aware
23 that this issue had been there with DOD and, in
24 fact, has been dealt --

25 ANDERSON: Dispensed with.

1 BURIL: -- with essentially agency wide on both
2 parts. But that is an example that may carry some
3 more weight.

4 ROBLES: It's also one other thing. It's a
5 partially contractual issue. With DOD you're
6 talking about all government right down to the
7 contractor, who is a government contractor.

8 With Cal Tech, they are a private
9 endowment. I don't know if they would be willing to
10 do that. That's the only thing I'm concerned about.
11 You can apply pressure, but they may not cave in.

12 ANDERSON: Ultimately, though, aren't you the
13 ones that tell them?

14 ROBLES: It would have to be renegotiated in the
15 contract.

16 ANDERSON: It's actually a contract stipulation?

17 ROBLES: Yes, it's actually a contract
18 stipulation.

19 BURIL: Yes, it is. It's a contract stipulation
20 in so much as there is a review process by which JPL
21 provides data to NASA. And that internal review
22 process is what's recognized as going through this
23 kind of --

24 ROBLES: It's built into the contract for not
25 only Superfund, but for every other project.

1 BURIL: Virtually every project we do.

2 ROBLES: They do not want to give any data to
3 NASA on a contractual basis unless they're sure they
4 know what they're doing, because their reputation is
5 built on it too.

6 ANDERSON: The internal NASA do loop is not part
7 of any contractual stipulation, is it?

8 ROBLES: No. We've tried to streamline that as
9 much as possible. It's myself and NASA
10 headquarters. As far as I've been able to get,
11 they've referred everything to me. Right now,
12 unless it's something with a dispute issue, that's
13 the only time they would get involved. I've tried
14 to get them out of the loop because, like I said,
15 that would be a black hole. They only have nine
16 people. They don't have time to look at these
17 documents.

18 SCHUTZ: Would it be possible for the agencies
19 and NASA to do concurrent reviews, not JPL and that
20 whole thing?

21 BURIL: That's up to him.

22 ROBLES: I come from Edwards, and that's what
23 I'm used to. I'm used to doing agency and federal
24 agency review concurrently.

25 SCHUTZ: That would cut out a few days anyway.

1 BURIL: I'll make that a note up here, then.

2 ROBLES: I would have no problem --

3 MELCHIOR: We've talked about the streamlining
4 with the DOD and DOE. In all those instances are
5 the responsible parties the entities that are doing
6 the characterization and design work?

7 ANDERSON: The contractor is doing the
8 characterization.

9 MELCHIOR: But in that case the Air Force has
10 accepted culpability for the requirements at that
11 particular site?

12 ANDERSON: Yes.

13 MELCHIOR: Do you have instances where there's
14 questions, where there might be DOD installations
15 where there are multiple PRPs other than defense
16 agencies?

17 ANDERSON: Yes, we do. But we don't have any
18 right now where we have third parties actually doing
19 the writing.

20 BURIL: We're unique again, I think.

21 ROBLES: Julie, this may become a moot point if,
22 let's say, within six months, as my private
23 contractor is working on the PRP issue and if we
24 hypothetically name the Army and JPL, Cal Tech as a
25 PRP, you're going to bet that they're not going to

1 go for this. They're going to want to review
2 themselves. And the Army definitely has told us
3 that. If we formally name them as a PRP, they want
4 to review the documents. They want the contract,
5 basically. They want it out of Omaha.

6 ANDERSON: Oh, yes, I could see that.

7 Could we at least see a copy of that
8 section of the contract?

9 ROBLES: Sure. I can get that for you.

10 BURIL: I will take that to my executive
11 management as well. Because like I say, I quite
12 honestly thought Edwards was an exception rather
13 than the rule.

14 ROBLES: It is an exception because they have
15 realized it's so massive. When I was running the
16 Superfund program working with Richard Russell, John
17 O'Kane and Sindi Mitton, it was impossible, all the
18 documents of all of the operable units. So they
19 came up with concurrent. And they all meet together
20 and they all review it right then and there.

21 BURIL: But what you're saying, Julie, is that
22 DOD and DOE --

23 ANDERSON: It may be a NASA exception, but it's
24 not a DOD exception.

25 BURIL: But that's the way it works as a rule

1 throughout the country?

2 ANDERSON: Not throughout the country.

3 BURIL: At least in Region 9.

4 ANDERSON: Definitely throughout our region and
5 through many of the other regions as well. I'm not
6 sure who doesn't do it that way.

7 BISHOP: You may also want to look at
8 distinguishing between draft and finals, because
9 you've already gone through one set at the draft.
10 So you may be able to say, well, okay, you won't do
11 it for the draft because they want to see the stuff
12 first, but the final is just incorporating comments
13 again.

14 BURIL: To get to final, you actually supply the
15 draft-final to the agencies. That's called out in
16 the FFA. That's a flat, set time frame. And that's
17 what's reflected in here. We've broken that up in
18 the same review fashion. But it's a set time frame
19 and we've maintained that as required by the FFA.

20 LOWE: One thing to consider, to think about is
21 that what the Air Force does instead of reviewing
22 paper copies before it comes to the agencies, they
23 meet with the contractors and look at the tables
24 that have been done and the maps and try and
25 identify concerns in that pre-draft stage rather

1 than reviewing an actual paper document. That may
2 be a way of cutting some of that time down.

3 BURIL: Let's look at that as well.

4 ROBLES: I know that Edwards has almost monthly
5 meetings --

6 ANDERSON: Yes.

7 ROBLES: -- where they just sit down and just as
8 the contractors come up from the field, the three
9 contractors, talking with the regulators and discuss
10 how it's going and make recommendations right there.
11 So when it gets to draft it's basically just, okay,
12 let's just fine tune this so that, really, a draft
13 is almost like a final draft.

14 ANDERSON: And particularly as you're getting
15 close to the submittal date, that's true.

16 ROBLES: Right.

17 BURIL: Well, that concern, then, as far as
18 review and so forth, that would carry throughout the
19 entire project, for all the draft documents at
20 least.

21 LOWE: Right.

22 BURIL: Let me go ahead and mark those, then.

23 As far as the draft-final documents, then,
24 because that time frame is set by the FFA, there
25 really isn't a concern there that I can discern.

1 Do you agree?

2 I won't mark those, then.

3 LOWE: I missed the question.

4 ROBLES: She missed the question.

5 BURIL: Who did? I'm sorry. I thought you
6 looked right at me and shook your head.

7 ROBLES: It was a look of amazement.

8 BURIL: When you go from comments on the draft
9 and then we supply the draft-final, that time frame
10 from the time that we receive your comments is set.

11 LOWE: Right.

12 BURIL: So we don't need to worry about that
13 JPL-NASA-agency review process, because that's
14 mandated. And we don't have any choice on it.

15 LOWE: Right.

16 SCHUTZ: I have a quick question. When we
17 renegotiated the Travis FFA what we did is we went
18 from a 60-day review to a 45-day view. I was just
19 wondering if the project had considered looking at
20 that option or if that's not something --

21 BURIL: With the level of review we would have
22 to do as far as having so many parties, I don't
23 think that would be very feasible. If this were
24 agency-agency, I think that might work better
25 because we are kind of unique in having that third

1 party thrown in. I think it would take that extra
2 time.

3 ROBLES: Also another point is, if you're
4 looking at changing the FFA you're looking at
5 renegotiating. That's the word from NASA
6 headquarters.

7 SCHUTZ: You're going to have to change the FFA
8 by -- you're opening the Appendix A up of the FFA by
9 bringing this new schedule in. Right?

10 ROBLES: Yes.

11 SCHUTZ: Is NASA saying EPA is going to have to
12 renegotiate the whole FFA?

13 ROBLES: They would have to look at it and they
14 may say "Okay, we'll accept it" or "We'll go to the
15 agency." I'm not sure.

16 SCHUTZ: We did it in the Appendix A. Just kind
17 of FYI, the 45-day time?

18 LOWE: I think if everybody agreed to it there's
19 no reason why you have to open up the rest of the
20 FFA. Just built in 45-45, instead of 60-60.

21 ROBLES: That would be my job to convince them,
22 because I can see it as a benefit. I'm all for
23 moving the schedule, because the review times are
24 just too much. Just too much.

25 BURIL: I'm just going through here just marking

1 these.

2 ROBLES: So, Chuck, wherever you're putting red
3 is where there's a question.

4 BURIL: Is the review times that we're going to
5 question. I'm going to take this back to my -- in
6 fact, I might even call them today if we break early
7 enough.

8 Just so you all know, I report directly to
9 the associate director of the Laboratory on this
10 issue. He is my person, he's third in charge at
11 JPL. And if he agrees that this is a concern and
12 maybe we can work this, then that's great. So I've
13 got a fairly high level person I can tap on the
14 shoulder.

15 ROBLES: Do you want to show them the review for
16 the agencies?

17 BURIL: As a concern possibly to knock that down
18 a little bit. All right.

19 You're only talking in terms of draft
20 documents, right?

21 LOWE: Right.

22 ROBLES: Right. Just draft.

23 LOWE: It looks like you streamlined some of the
24 reviews, like these are just addendums, you've given
25 us 15 days.

1 BURIL: That was because I didn't know what to
2 call those. I just took a shot at it with the idea
3 that if that's fine, gee, that's great. If not,
4 maybe we should modify.

5 LOWE: I think that makes sense. You know, if
6 there aren't any major changes to those documents
7 and they're not going to be very huge we're not
8 going to need 60 days to look at them. So --

9 SCHUTZ: It probably isn't the same SOPs and
10 stuff. If you don't want to change your QAPP and
11 you want to maintain consistency, you don't need to
12 go into your health and safety plan. Your work plan
13 is pretty minimal, it's a field sample plan, you're
14 referring back to --

15 BURIL: Exactly. We're going to do this in
16 addition and we're going to use the same techniques,
17 the same processes, everything.

18 SCHUTZ: Right.

19 ROBLES. Your red spot's on the wrong box on the
20 bottom there.

21 BURIL: You're right.

22 SCHUTZ: The other thing, too, Chuck on that
23 45-day review, you know one thing you can look at in
24 the FFA you guys can consider is, you could stay
25 with the 60-day for the draft and then go 45 for

1 draft-final or something to kind of help shorten it
2 a little bit. You don't have to necessarily go 45
3 across the board.

4 BURIL: All right. That's something we can
5 certainly play with. Sure.

6 ROBLES: Good suggestion. Good suggestion.

7 BURIL: We've identified that, then.

8 Is there anything else under this area
9 that we want to talk about in terms of concerns?
10 This is modification of primary documents.

11 I'm just focusing on that right now. I've
12 got items 6 through 10 as concerns with the idea of
13 doing concurrent review, a predraft review in
14 addition to whatever we might do and maybe
15 shortening the time to 45 days.

16 No, excuse me. That's for other
17 documents, not for this one.

18 BISHOP: This one is already 15.

19 BURIL: Yes, this one is already 15.

20 Is there anything else we might want to
21 identify as a concern we might want to talk about
22 further?

23 Can I mark the remainder of those green,
24 or is that being pretentious?

25 LOWE: Well, line 13 it says it's the final

1 addendums, and typically they're the draft-final for
2 a period of time and then they're final.

3 BURIL: That's easy.

4 Now, do you want to take the same process
5 that we have in, for example, draft-final document
6 where we talk about agency review for 30 days before
7 they automatically go final, or just leave that out?

8 LOWE: I think we want to look at a shorter time
9 frame for these. I mean, I think they're not going
10 to take as long for us to look at as the draft-final
11 RI.

12 CUTLER: One thing, could we start field work at
13 this point? Because this schedule here, if you look
14 on the bar chart, ends right when our contract is
15 modified with JPL. So if we add a 30-day draft
16 review cycle in here, if we can't start the field
17 work until the addendums are final --

18 BURIL: Everything slips by a month.

19 CUTLER: Right. It shifts everything a month.
20 So if we can start field work with draft-final
21 addendums, then the field schedules won't get pushed
22 out.

23 LOWE: I think we need to look at it when we get
24 closer to those documents. As long as there aren't
25 any major issues and like major comments that NASA

1 decides they don't want to incorporate, then it
2 shouldn't be a problem.

3 ROBLES: I have a concern, for one thing, is
4 that when you say you guys could do the review,
5 we've gotten comments after that certain time
6 period.

7 Are we going to say when that time is
8 open, any comments coming after that will not be
9 accepted by us?

10 SCHUTZ: Pursuant to the FFA you can say that.
11 But the thing is, too, those are addendums. You're
12 going to be referring back to SOPs that have already
13 been established and accepted by the agencies.
14 There shouldn't be any big outstanding issues.

15 BURIL: On these particular documents I don't
16 think that would be an issue.

17 SCHUTZ: Ten pages at the most.

18 BURIL: The next documents we're going to get to
19 are the RIs. Obviously those are going to have a
20 lot of potential issues.

21 MELCHIOR: The biggest concern is if you change
22 the scope of work. If you go from X number of wells
23 to Y number of wells, if you go from 250 foot to 450
24 foot, that's where really the concern we have is
25 during the review process.

1 BISHOP: I understand that as a concern, but
2 that should come up in the first review, not in the
3 response to comments.

4 BURIL: Right.

5 MELCHIOR: Second time around.

6 BURIL: So I changed that to insert the going
7 final portion of this. I guess we'll have to talk
8 about starting with the final consideration.

9 Any questions? I think maybe we can cover
10 these next two sections and break for lunch.

11 SCHUTZ: I actually have some questions on that
12 next section, the preliminary contractual
13 requirements.

14 I guess between looking at the 105 days
15 allotted for that, and then going to your letter
16 that was sent, dated February 13th, let's see, the
17 second paragraph under the schedule extension, you
18 talk about that NASA/JPL anticipates six months to
19 develop a preliminary contract mechanism needed to
20 implement the new scope of work.

21 BURIL: Right. If you look at the actual dates
22 we're starting on January 18th and ending on Monday,
23 June 17th. That's six months.

24 BISHOP: So you've already begun.

25 BURIL: Yes. We've already begun. Absolutely.

1 We do not anticipate this being an issue in terms
2 of --

3 SCHUTZ: Sorry. I forgot the 105 days versus
4 the actual date thing.

5 BURIL: Exactly.

6 SCHUTZ: Where does this other part fit in? I
7 also have another question about it. Your third
8 paragraph "After the primary contracts are in place
9 NASA/JPL's contractors can then generate the
10 contractual mechanisms needed to complete the new
11 scope of qualified drillers, laboratories and
12 subcontractors."

13 This will take three to four months?

14 BURIL: Right.

15 SCHUTZ: Where is that, then? Okay. Sorry.

16 BURIL: It's all that.

17 SCHUTZ: Will it take that long? Can't your
18 contractor use the same drillers and laboratories?

19 BURIL: No.

20 SCHUTZ: You're not going to use the same labs?

21 BURIL: Well, we may well do that. But because
22 it's gone beyond a certain set time frame under the
23 FAR and under the requirements that JPL has with
24 NASA we are at ground zero.

25 ROBLES: We start all over again.

1 BURIL: We have to repeat everything.

2 SCHUTZ: If you end up using different labs, you
3 realize that EPA will need to -- I mean that lab
4 will have to make sure they can follow the QAPP.
5 You want to make sure you have consistency there.

6 BURIL: Exactly, yes.

7 SCHUTZ: And then if they follow some of their
8 lab, if they have a lab QAPP, EPA needs to review
9 that lab QAPP in order to ensure consistency with
10 the date you've already --

11 BURIL: We understand all that. We're hopeful
12 all that is going to be a non-issue. We're crossing
13 our fingers the bids will come in and the same
14 people will get it. But we can't guarantee that.
15 We have to go through the motions.

16 CUTLER: Actually, the Lab is in a different
17 category. They're still on contract. OU-3
18 sampling. So their contract does not expire so we
19 can extend theirs, but the drillers are long gone.
20 So we have to go through the whole experiment
21 process with the drillers. That's what's going to
22 take a long time.

23 RANDOLPH: That's for OU-1 and OU-3 only. OU-2
24 lab is out the door. You got to start over from
25 ground zero.

1 CUTLER: That shouldn't be a problem.

2 BURIL: The lab for the groundwater OUs.

3 MELCHIOR: For us to extend this contract for
4 the groundwater sampling requires a sole source
5 justification. The dollars involved may require
6 us -- I mean, we have a government-approved
7 procurement system. We don't intend to lose it.
8 And we just can't take too many chances on --

9 BURIL: In fact, JPL's contracting officer would
10 probably not allow them to do anything less. So
11 we've got kind of a dual edge there.

12 MELCHIOR: We'll look very hard at that and take
13 into account all the issues that would help justify
14 that. But we have to be cognizant of the fact --

15 BURIL: But I appreciate your pointing out,
16 Michelle, if we do end up having to go to somebody
17 new for the soils effort, we're not only at ground
18 zero for contracting but for a number of things as
19 well.

20 SCHUTZ: You just want to be make sure you have
21 comparability with your data. After I left this
22 project I've gone to a number of projects where
23 there's been issues of lab fraud and changing labs,
24 and, you know, multiple labs.

25 BURIL: I've heard some of those horror stories.

1 SCHUTZ: Just make sure either that the Lab can
2 follow your QAPP because it's part of your
3 contractual agreement. Those control limits need to
4 be set throughout the process or you're going to try
5 to compare apples to oranges on your base leg. You
6 won't be able to do it and the agencies will
7 probably come in and say "You need more data."
8 That's not a position you want to be in.

9 BURIL: I agree.

10 SCHUTZ: Just kind of FYI.

11 BURIL: Sure. I appreciate that.

12 BISHOP: If we're going to still look at this
13 blue stuff here -- since you're going through the
14 process with Foster Wheeler now on setting up this
15 contract stuff, is there anything that Foster
16 Wheeler can do to start the process from the
17 subcontracts?

18 BURIL: No.

19 RANDOLPH: No.

20 BURIL: Unfortunately, the way --

21 BISHOP: You can't advertise? You can't do any
22 of that stuff?

23 BURIL: Unfortunately, the way we have to work
24 this is we have to have our contract in place with
25 them. That generates the authorization for them to

1 go ahead and bid that out. It's basically
2 committing to spend federal monies at that point.
3 Without that contractual mechanism in place, I have
4 no authorization to do that.

5 BISHOP: Maybe it's different from the way yours
6 is set up. I went through the whole process of
7 putting out a bid spec when the EPA was going to
8 give me money to do work. When that money didn't
9 come through, we cancelled it.

10 SCHUTZ: DOD does that as well. Their
11 contractors will start --

12 BURIL: I think we're different in that regard.

13 BISHOP: We just started the paperwork because
14 they said "We're going to give you \$50,000 to do
15 soil gas work. Start that paperwork so that when
16 the money comes in you can actually do it."

17 So we went through, advertised it, did
18 all that and it didn't come through.

19 BURIL: You talked to DOE about this, didn't
20 you?

21 ROBLES: The problem is the FAR does not allow
22 that. The thing is, if you cut the contract and a
23 person is about to get it, then you have stipulated
24 damages to pay that person for cutting that contract
25 off right at the knees. So they can't obligate

1 government funds like that.

2 BISHOP: You're not obligating it when you
3 advertise it, though, are you?

4 ROBLES: But according to the FAR, you can't
5 advertise unless you have the authority to do that.

6 BISHOP: Okay.

7 BURIL: We don't have the authority because that
8 part is granted by the contract.

9 ROBLES: I will tell you this, that we're trying
10 to, under re-engineering of the government, trying
11 to get waivers for the FAR because the FAR is the
12 biggest impediment to a lot of what we do and to a
13 lot of what JPL does. If we could ever get around
14 the FAR it would be much, much smoother. We can't
15 do that right now.

16 BURIL: At least not yet.

17 Any other questions on preliminary
18 contractual requirements or subcontractor contracts?

19 LOWE: Just out of curiosity, if you had to
20 award a brand new contract instead of extending this
21 contract with Foster Wheeler, would it take much
22 more time? About the same time?

23 BURIL: Another year.

24 RANDOLPH: At least another year.

25 LOWE: So it would be a year and a half instead

1 of six months?

2 ROBLES: Yes.

3 BURIL: Because we would have to first generate
4 the contract that authorizes a new contractor to go
5 out and get these bids and do all of that. So
6 Foster Wheeler is locked in here like I can't
7 believe. We don't have much choice unless we want
8 to extend the schedule by upwards of a year and then
9 basically, really, you're talking more time than
10 that because that contractor, after the contract is
11 in place, has got to come up to speed on the
12 project. This has been a big part of B.G. and
13 Mark's life for about eight years now. Dan, he's
14 not quite as involved as he has been, but you
15 started in '86?

16 MELCHIOR: I started with the project back in
17 '87.

18 BURIL: You guys came on in '89.

19 RANDOLPH: I was in '90.

20 CUTLER: '89.

21 BURIL: There's a lot of, quote, corporate
22 history here that we can't lose.

23 LOWE: I was just curious about when we
24 eventually get to the ROD stage if it's going to be
25 a year and a half to when the ROD is signed to when

1 NASA can get out there.

2 BURIL: That's another question. When we get
3 out to that point, what we're anticipating is
4 actually going to a competitive bid. But we will
5 probably start that competitive bid process well in
6 advance of the final ROD being generated.

7 ROBLES: There's two things that are being
8 discussed in the federal government right now, is
9 that the contracting officers have come to the
10 conclusion that there's two ways to do the cleanup:
11 Either award it to the person who got the ROD,
12 there's no conflict of interest there, if they set
13 up the contract correctly; or they manage it with a
14 sub and we oversee that.

15 And the third way is to get a whole new
16 person. They've realized that has been one of the
17 biggest impediments to cleanup because then the
18 person who is doing the cleanup has no vested
19 interest in doing the work. That's one of the
20 reasons why contracting officers are starting to
21 realize. If they did the ROD, they're more than
22 likely going to work to that standard that was
23 developed. They're starting to do that and starting
24 to get waivers around the FAR in that sense.

25 SCHUTZ: You have to keep in mind you've only

1 got 15 days from the day that ROD is signed to when
2 you start remedial action. It's got to be more than
3 breaking ground. It's got to be substantial
4 remedial action is how it's being interpreted by the
5 legal people.

6 BURIL: Debbie had already mentioned that to us.
7 We're aware of it and we hope that we will have no
8 problems in meeting that. Of course, based on this
9 schedule currently, that's a ways out there.

10 LOWE: I didn't want to take a lot of time
11 talking about that. I wanted to explain that's
12 something to be thinking about.

13 SCHUTZ: That's not a good idea.

14 BURIL: If we're all still working on this
15 together by then, we'll be surprised.

16 BISHOP: So by looking at this blue stuff again,
17 we're talking about contractual issues going until
18 October.

19 BURIL: Correct.

20 BISHOP: So we start field work in November?
21 October?

22 BURIL: I think quite literally the same day
23 that that task is over. Let's check it.

24 BISHOP: I couldn't quite find it on this one.

25 BURIL: Implementation field activities

1 commences on Wednesday, October 2nd. The
2 contractual requirements are completed on Tuesday,
3 the 1st. So it's quite literally the next day is
4 the way we have it scheduled. So there is no lag
5 time. Once that's done, we move.

6 LOWE: So you can't do field work before
7 October, but you can modify these documents?

8 BURIL: The way our contract is currently set
9 with Foster Wheeler I have a kind of a catch-all
10 thing that I can use for general consulting services
11 that doesn't include major efforts and major
12 dollars. And I'm able to use that catch-all to
13 develop these addendums as a general consulting
14 effort.

15 If I were to ask them to go out and
16 subcontract this, like they would with drillers and
17 so forth, the contracting officer would be coming
18 down with both feet.

19 LOWE: Okay.

20 ROBLES: Any other questions?

21 BURIL: Have we gotten through the two blue
22 areas? Recognize, too, the two blue areas that are
23 on this schedule that I'm working on are identical
24 to the ones on Operable Unit 2. And they're the
25 exact same time frames. So those actually cover all

1 of the project, which is why it's denoted in purple
2 on the summary schedule. There's only one set of
3 this that we've got to go through. It covers the
4 entire project.

5 LOWE: Actually, one more question. It doesn't
6 seem like there's any reason to try and accelerate
7 getting these final addendums if they're tied to
8 number 21 and, in fact, can't be moved up any more
9 anyway.

10 MELCHIOR: That's a good point.

11 BURIL: Say that again.

12 LOWE: It seems like there's no reason to try
13 and accelerate this modification of primary
14 documents if all that you guys need is to have it
15 finalized before number 21.

16 BURIL: That's true. That's true. As long as
17 it's done by the date that line 21 identifies, it
18 doesn't matter.

19 CUTLER: That's basically line 13. But if you
20 were going to add a 30-day review cycle for a draft,
21 then that would push this out.

22 LOWE: Okay.

23 SCHUTZ: You want to make sure they go final by
24 then.

25 BURIL: That's what we'd like.

1 CUTLER: If it doesn't have to go final, we can
2 start doing some of these things. I don't think
3 there's going to be any problem. The scope's all
4 ironed out. It's not going to be a problem. We
5 just keep aware.

6 These guys might not want to do that until
7 things go final and you're going to -- this line 21
8 won't start 6/18. It will start 30 days after that
9 if you have 30 days up here.

10 ROBLES: I think if we work on these documents
11 right, I still have a concern with what you're
12 saying.

13 MELCHIOR: Absolutely.

14 CUTLER: I understand. I think that's fine.
15 But the only way to get around that is to --

16 ROBLES: I know, but --

17 BISHOP: Now, when you were saying draft-final,
18 what does that actually mean? It means they
19 can't -- they're not approved to start work for 30
20 days after we approve it, the draft-final?

21 BURIL: Oh, no. If you guys approve it we'd be
22 ready to roll like that. We need something that is
23 a final approved document, is really what it comes
24 down to. If you can take a draft, review it and say
25 we don't need a draft-final because this is fine the

1 way it is, then we're ready to go. It becomes a
2 final document.

3 ROBLES: If it's agreed to it becomes a final
4 document, we're ready to go.

5 LOWE: The significance of the draft-final is
6 that, you know, we haven't reviewed the responsive
7 comments, and then you have a certain number of days
8 to invoke dispute, or whatever, on a document.

9 BURIL: When I developed this, and I probably
10 should have talked with you a little bit more when I
11 wrote this schedule out, but I was viewing this in
12 my own mind as really a non-issue series of
13 documents, since the scope we've already discussed
14 at length and we've essentially agreed to it and the
15 real issues now come around to trying and trim time
16 off the schedule and make that a little bit more
17 workable. Scheduling issues, aside from what's
18 required in the FFA, really don't enter into these
19 documents. And so I would look at, if we were able
20 to say that the scope of work we're talking about is
21 still agreeable, that these documents could move
22 forward even while schedule negotiations are
23 continuing, provided that we don't change scope as a
24 result of the schedule changes.

25 LOWE: Right.

1 BISHOP: Right. I agree.

2 BURIL: Anything else in those two blue sections
3 there?

4 It's 12:00 o'clock. I propose that we
5 take a break and come back in an hour and pick up
6 from there.

7 ROBLES: It's 12:30.

8 BURIL: If it's 12:30, then I suggest we do it
9 anyway.

10 (At 12:30 p.m. a recess was taken
11 until 1:38 p.m. of the same day.)
12
13
14
15
16
17
18
19
20
21
22
23
24
25

AFTERNOON SESSION

1:38 P.M.

BURIL: As I recall when we broke, we were looking at the blue stuff on the schedule, which on this schedule is the black stuff here.

Are there any other questions about the preliminary contractual requirements? I don't recall any, so can I mark these as green and we can move on and deal with any others that we might come across?

NIOU: I'm curious. For the old schedule that shows that after the work plan everything being finalized until the time you even finish your field work for OU-1 only takes about nine months, a total time, that including contractual time, everything?

BURIL: No. Contracts are already in place. That's the difference, at least in terms of this amount of time and these amounts of time. That was the original contract that we had built in a much different way than we do now. The contracting officer insisted that we set up something specific for Superfund, and that was based on scope of work rather than kind of a blanket thing that we had at that particular time. So it's a different scenario

1 as far as contracts go.

2 Are there any other questions that we want
3 to bring up on this one? Because if not, I'm just
4 going to mark these green and we can talk about
5 whatever else. Okay. I'll mark them green, or
6 blues.

7 Under the subcontractor contracts
8 development, now, this one is specific for OU-1 and
9 3. This one is specific for OU-2. The ones I just
10 marked are actually identical to the two OUs.

11 Are there any other questions about these?
12 These actually, for both operable units, they go
13 concurrently and they end up on the same day. We
14 actually start field activities in both facets on
15 the same day.

16 Okay. It doesn't look like there are any
17 takers on that. I'm just going to mark those as
18 good.

19 LOWE: I thought you had some questions on
20 those, Penny.

21 NAKASHIMA: Actually, I did.

22 BURIL: Did I mark too soon?

23 NAKASHIMA: Just ask if there was any way of
24 combining any of the tasks under the subcontractor
25 contracts development implementation, where you have

1 the CWO for the procurement of drilling.

2 BURIL: Actually, if you look at it, they are
3 happening on the same days.

4 NAKASHIMA: Along with lines 28 through 31. Is
5 there any way of combining those?

6 BURIL: They are combined, actually. If you
7 look at the dates, they're exactly the same dates.

8 RANDOLPH: They show up real well over on the
9 other one.

10 NAKASHIMA: On my copy the dates are different.
11 One starts June 18th and finishes June 28th and one
12 starts July 1st.

13 BISHOP: There are ones that are offset a little
14 bit.

15 MELCHIOR: Are you talking about getting the CWO
16 and then the procurement? They're two different
17 issues.

18 NAKASHIMA: And prepare bid specs.

19 BURIL: They're different tasks.

20 NAKASHIMA: You can't combine any of them at
21 all?

22 BURIL: No, you can't, because we're talking
23 about different scopes. We're talking about well
24 drilling in some cases, soil samples in another.

25 BISHOP: Couldn't they be done concurrently?

1 RANDOLPH: They are done concurrently.

2 BISHOP: No, they're not.

3 BURIL: Yes, they are.

4 MELCHIOR: They're talking about the CWO. Our
5 process for you to send us the CWO and get us to
6 fill it back in and get it back to you and they're
7 comparing that with the actual procurement activity
8 itself.

9 BURIL: You mean with this up here?

10 MELCHIOR: See, one is an internal JPL.

11 BURIL: Oh, down here under procurement of
12 these?

13 ROBLES: Yes.

14 BURIL: Oh, okay. Let me explain what that is.

15 The way our contract is set up with Foster
16 Wheeler is we have to authorize them to perform
17 certain tasks that are a part of the overall
18 contract. And this is the way that we basically
19 keep track of the individual pieces of these things
20 to understand what's going on. That's why we've
21 broken it down into these different tasks. The
22 mechanism we use is called a Contract Work Order.
23 It's essentially a mini contract under the auspices
24 of the major contract that encompasses the entire
25 scope.

1 BISHOP: Let me back up a minute. You're going
2 to have to spend up here six months doing a
3 preliminary contract with Foster Wheeler and then
4 write specific contract orders for every piece of
5 that?

6 BURIL: That's the way it works.

7 BISHOP: But then what are you doing this for if
8 you're going to do all these?

9 BURIL: Because these can't be written unless
10 this is in place.

11 BISHOP: You can't combine this stuff into there
12 now that you know all that?

13 BURIL: No. That's not the way the contracts
14 work.

15 RANDOLPH: Too bad you missed our phone call.
16 This was all explained at that time.

17 BISHOP: I was out of town.

18 BURIL: Regardless, it's one of the things that
19 gets built in here. One of the things I hope will
20 allay some of the concerns, if you look at dates of
21 actual start and finish on both operable units, they
22 start and finish on the same day for all of this
23 stuff. It's nine days long, essentially two weeks.

24 MELCHIOR: Chuck, one of the things that might
25 allay some of the concerns here is when JPL issues

1 us a contract, Jon, it's a contract that encompasses
2 the scopes of work that we've all agreed upon to
3 here. That does not authorize Foster Wheeler to
4 begin work on any specific task. For instance,
5 you've got, let's say, a feasibility study report,
6 for instance, which may come a year from now, or
7 whatever day it is. We are not tasked to start that
8 particular work until we receive a work order. Even
9 though the blanket contract encompasses it, we are
10 not authorized to begin work on any of those
11 specific tasks.

12 BISHOP: I understand that. What I guess I'm
13 having trouble with is I was under the impression
14 that you couldn't start any amendment of contracting
15 with Foster Wheeler until we had a specific approved
16 work plan out there, and so we've been waiting for a
17 year to get a specific approved work plan so that
18 you could start a contract with Foster Wheeler to do
19 that additional work. If it's a blanket work
20 plan --

21 BURIL: No, it's not. It's an encompassing
22 contract based on the current scope of work that
23 we've agreed to. That's what we have to have, is a
24 scope of work that's agreed to. Even though we're
25 still talking schedule and so forth, we basically

1 know what issues we want to deal with in terms of
2 four additional wells, and so on.

3 BISHOP: Right. I guess what I have trouble
4 with, it's essentially a blanket contract because
5 you're doing the actual work orders here. I mean,
6 it's maybe not blanket, but these are the specifics
7 down here. So why does it take so long to do a very
8 general, to do this agreed-upon scope of work type
9 contract? Is that an internal NASA thing?

10 ROBLES: That's the time that it takes.

11 BURIL: That's the beast. I don't have a better
12 answer for you other than that's the beast.

13 I think he understands that. He's just
14 wondering why we can't combine the whole thing in
15 order to make it work faster. The answer is that's
16 the way the beast works.

17 NAKASHIMA: What's the difference between 21 and
18 28?

19 BURIL: On which schedule?

20 NAKASHIMA: 1 and 3.

21 No, I'm sorry. 21 and 27. Does that
22 include --

23 BURIL: That's the same. I have to authorize
24 them with the CWO to go ahead and generate the bids
25 and the bid specs and all the other things. I can't

1 just turn them loose. The CWO is their
2 authorization to proceed on work.

3 CUTLER: It's almost like a purchase order.
4 Here is \$10,000, write it, go get us some bid specs.
5 So they'll write us a CWO for \$10,000 and then with
6 that we can write bid specs even though in the
7 blanket contract it says prepare bid specs, or to
8 that effect.

9 BURIL: That's the way of the beast.

10 MELCHIOR: That's no different from the way you
11 contract. Not at all. EPA is exactly the same.

12 SCHUTZ: Mods on the scope of work. I
13 understand. I had to talk to our POs yesterday
14 about those. When we do set up a contract it is a
15 timely process. But when we do mods on our scope of
16 work, I don't think it necessarily takes six months
17 to a year.

18 BURIL: Realize this, that the contract we're
19 dealing with has essentially expired. We're
20 starting over. The only thing that bails us out of
21 this is we're able to go to a sole source
22 justification with these guys because they've been
23 on it for so long. If we didn't have this kind of
24 corporate history we wouldn't be able to do this and
25 we'd be out another year simply to get the bid

1 process dealt with.

2 SCHUTZ: It's interesting because on Travis,
3 they canned their contractor and they brought in --

4 BURIL: Different agency.

5 SCHUTZ: It's just interesting.

6 BURIL: DOD has got it together. I've got to
7 say that. NASA is still working at it.

8 SCHUTZ: Within months they had a new contractor
9 and they're up and running full speed.

10 BURIL: That's the distinction between how NASA
11 is working and how DOD is working. There's not much
12 to be done about it, unfortunately.

13 LOWE: Are these nine days used for JPL to write
14 these CWOs?

15 BURIL: It's basically to generate the entire
16 thing. In other words, the whole process is we
17 write it. We then ask them to give us the cost for
18 the scope that's there. They send it back to us.
19 We review it, approve it, send it back to them.
20 They then put it on their contract as being charged
21 to these account numbers and so forth, and away we
22 go. That whole process takes nine days.

23 RANDOLPH: And your procurement.

24 BURIL: And our internal approvals with
25 procurement.

1 LOWE: So on 6/18 you pretty much have the CWO
2 already written and it's just the process of --

3 BURIL: It's the process of going through.
4 Writing the CWO takes a day or two. Getting their
5 estimates back will take three or four. It has to
6 come back through us, through our procurement
7 office, get signed off, back out to them, to their
8 contracting folks, through their contracting
9 efforts, on to their contract to go and say, "Yes,
10 we have authorization by the CWO to charge, let's go
11 ahead and charge." That's the whole encompassing
12 portion.

13 Any other questions on this? Like I say,
14 these two mirror each other. It's different tasks,
15 but the amount of time we're talking about is the
16 same.

17 BISHOP: Just for my own curiosity, does NASA
18 and JPL have any kind of an "if under" order, like
19 insurance companies pay right away. If they get an
20 official order saying if you don't do this, then --

21 BAKER: A legal driver, you mean?

22 BISHOP: Yes. Does that have any --

23 BURIL: Not to Cal Tech, because it would be
24 going to NASA. While they could ask us to do it,
25 they would have to then waive the requirements of,

1 in this case, waive the FAR, waive our prime
2 contract and a variety of other things. Cal Tech
3 probably isn't going to stand up and do that without
4 actually saying, "Okay, let's talk about this at
5 length, about a renegotiation of the contract."

6 BISHOP: I'm just wondering because I've seen it
7 sometimes in different situations where you can --
8 if you word it differently.

9 BURIL: It's a really different kind of
10 situation, I think, from the standpoint that I think
11 being a billion dollar entity contractor like we
12 are, things get wire brushed pretty well when it
13 comes to actually dealing with procurement and
14 contractual issues.

15 One of the reasons, too, is that Cal Tech
16 gets audited an awful lot. I think last year we had
17 almost 200 audits that came through. A lot of them
18 focus on exactly these kinds of issues, procurement
19 issues. So they're extremely cautious to make sure
20 all the "i"s are dotted, the "t"s crossed and
21 everything gleams beautifully.

22 ROBLES: Every task order that is completed goes
23 through an audit process with the General Accounting
24 Office and the NASA IG.

25 BAKER: Every task order is every one of these

1 CWOs?

2 ROBLES: No. The whole Superfund is audited.

3 BURIL: Under the big umbrella contract that JPL
4 operates under is task orders that assign specific
5 tasks.

6 BAKER: This is one task order?

7 BURIL: This whole thing is under one task
8 order.

9 BAKER: So when you do this contract
10 modification, you had the original contract to do up
11 until now, you had one big work plan for that.

12 BURIL: Exactly.

13 BAKER: You can't go outside of the scope of
14 that.

15 BURIL: Exactly.

16 BAKER: So now you're writing one for the
17 next --

18 BURIL: For the next series of work that we're
19 going to do, which is essentially the scope, and
20 then the implementation of that contract is to be in
21 CWOs.

22 BAKER: Is there some way of making sure when
23 you write that contract modification for the whole
24 next thing that that has some flexibility?

25 BURIL: Yes. Within certain limits I can do

1 that. What we've done right now is we've tried to
2 tie the implementation of the contract to the
3 completion of the work identified in the primary
4 documents, the Work Plan, the FSAPs and so forth.
5 As we have to amend those, we're in a little easier
6 position now because now we aren't having to
7 reevaluate on a basis of the scope that's presently
8 in place because that's not what the contract says
9 to do. It says "complete as required by," as
10 opposed to "complete the following scope."

11 So if we do get to a point where we have
12 to amend again, we would hopefully be able to simply
13 amend the documents, once we all come to consensus,
14 then add just extension of the date and dollars.
15 And it goes from there.

16 ROBLES: Under the old contract you couldn't
17 extend. The reason why the task order system was
18 developed is so it precludes JPL from taking a
19 project and running it to ad infinitum and using all
20 the money they could, basically. It would be a
21 black hole for that. That's why it's specific task
22 oriented. That's why they are limited. This task
23 order is now based on performance, which is
24 something very new. It took a lot of fight to get
25 this because the contracting officers did not want

1 this.

2 BAKER: So if a year from now someone wants
3 another gas monitoring well --

4 BURIL: And we all come to agreement on that,
5 then we can modify the existing documents via
6 addenda or whatever else, and that then becomes the
7 new requirement under the task of complete the
8 requirements.

9 BAKER: And provided that all comes in under the
10 ceiling of whatever that absolute dollar value is.

11 BURIL: Even that can be raised. We're doing
12 that now.

13 ROBLES: It's now built on the performance,
14 whereas before it was limited task and scope.
15 That's the thing that is important now. We're
16 basing it on the performance so we don't have to go
17 through this gyration again.

18 BURIL: We're trying as greatly as we can to
19 avoid these procurement headaches because they
20 obviously are protracted, complex and no one likes
21 going through them, least of all me. I think that
22 we've actually got a contractual mechanism now that
23 will allow us to do so and still stay within
24 requirements of the FAR. Lord knows I wish we had
25 something like an AFCEE or something like that,

1 because it would be a lot easier.

2 MELCHIOR: Don't kid yourself.

3 BURIL: It looks easier to me because I don't
4 have to deal with it.

5 Any other questions on that?

6 LOWE: I have a question. Why is the process
7 for getting a drilling subcontractor different than
8 getting a lab? It seems like there's more steps in
9 there.

10 MELCHIOR: What line items are you looking at?

11 LOWE: 21, 31 and 32.

12 BURIL: You're getting into a really interesting
13 scenario here.

14 MELCHIOR: Three steps.

15 BURIL: What happens when JPL approves a
16 contractor such as Foster Wheeler to go out and
17 subcontract is they have to basically pull together
18 all the bid specs and so forth. JPL then has to
19 review those and approve them because in the same
20 vein as NASA doesn't want us running out and
21 spending money ad infinitum, we, in the same
22 situation, have to show that we are controlling our
23 contractors to the same degree that NASA controls
24 us. And because of that, we are faced with having
25 to go out, have these guys generate the bid specs,

1 review them, approve them, not from just a technical
2 standpoint but from a contractual standpoint that
3 all the "t"s are crossed, "i"s dotted and so forth.
4 Then they're approved to go ahead and get the bid.
5 They can evaluate the bid, and then they make a
6 recommendation for award.

7 That then has to come back and go through
8 the same process again to verify that the award was
9 made in a fair and equitable fashion and is actually
10 the best thing for JPL to go ahead and do. When
11 that happens, then these guys are given approval to
12 go ahead and execute their recommendation and award
13 the subcontract. That is built into our contract,
14 and it is lock stayed in there. We have absolutely
15 no choice in that. It is a horrendous amount of
16 work for everybody involved. But we're just stuck.

17 BISHOP: No, that's not true. You can give us
18 money and we can go out and contract. So long as we
19 contract and follow regulations they don't review
20 it. They don't --

21 SCHUTZ: DOD doesn't do that.

22 BURIL: NASA has got special FAR regulations
23 that say they do.

24 NAKASHIMA: Why can't JPL evaluate the bids? Is
25 it possible for JPL to evaluate the bids and then

1 you skip that step?

2 BURIL: No. No.

3 ROBLES: You can't.

4 BURIL: It is built into our prime contract that
5 if we are going to hire a subcontractor and they are
6 going to subcontract, that we do not have the
7 purview to tell them what to do in the case of
8 getting a bid.

9 We can only instruct them to procure the
10 services. If they choose to go out to a
11 subcontractor, it's up to them to follow the
12 process, and that's all there is. We can't instruct
13 them to go use this contractor without giving us
14 sole source justification at the federal level.

15 NAKASHIMA: No, no, no. I'm saying is it
16 possible for JPL to evaluate the bids that come in
17 for selection?

18 BURIL: In other words, skip their review?

19 NAKASHIMA: To skip their review, since you have
20 to review it anyway.

21 BURIL: That places an onus on us to evaluate
22 the bid. If they disagree with our evaluation, then
23 we're at odds with our contractor.

24 CUTLER: That doesn't take much time. What
25 takes the consent review is JPL legal. We have five

1 weeks in here for that. It took us nine weeks once.

2 ROBLES: Everybody is going to have to
3 understand one thing. This contracting system was
4 built to put spacecraft into space, not for
5 Superfund cleanup. We have to follow it.

6 The reason for that is since JPL has been
7 cited as the organization that will support NASA in
8 its space unmanned exploration and they have a
9 requirement in their needs to subcontract out, this
10 mechanism was developed so that there wouldn't be
11 abuses. That's the system.

12 If we were a center, then you are
13 absolutely right. If we were like Ames or Dryden or
14 Langley or Kennedy, we could do that, because now
15 you're talking about we're a center and we run our
16 own procurement office. But since we're contracting
17 to JPL and they are subcontracting out to Foster
18 Wheeler. This happens with spacecraft. You got JPL
19 subcontracting to McDonnell Douglas, who
20 subcontracts to the University of Arizona, who
21 subcontracts to AeroJet and other people like that.
22 It goes on and on and on. That system was set up
23 for that. That's the system we have to live with.

24 BURIL: One of the things, too, I think this is
25 built around is the idea that there is a desire to

1 avoid the situation of having a sweetheart kind of
2 arrangement. We cannot go to our favorite
3 contractor time after time after time. We have to
4 bid it. And they cannot in turn go to their
5 favorite contractors time after time after time.
6 They have to bid it. So there is this system of
7 checks and balances.

8 BISHOP: I think we're just going to keep
9 bringing things up as we see things, because there
10 may be things slip in.

11 BURIL: Sure. That's fair. That's why we're
12 going through this, so you can understand.

13 RANDOLPH: Jon, there are some levels of which
14 we can sole source subcontractors or go back and do
15 a paper evaluation of three different phone calls,
16 but they're all limited by cost. Once we reach that
17 threshold where it requires a consent review, our
18 hands are tied and we have to follow.

19 LOWE: What is that threshold?

20 RANDOLPH: \$100,000.

21 BURIL: So I think essentially any of the lab
22 work, any of the drilling work all falls under that.

23 MELCHIOR: Something like the surveying, we do
24 that internally since it's under \$100,000.

25 BURIL: That's why you don't see any processes

1 there, other than issuing the subcontractor CWOs for
2 surveying and so forth. There's no other steps
3 there. They just happen after that because these
4 guys have the autonomy to go ahead and make it
5 happen. All the others don't.

6 Any other questions on that part? Can I
7 leave those marked green, then? Okay.

8 Hearing no screams of agony, I'll move on.

9 BISHOP: Well, you just convinced us all that
10 you have no choice on any of these. So it's really
11 not an option.

12 BURIL: That's really what we're trying to
13 convey, is that there is no choice on the ones that
14 are marked in blue. We have to do it.

15 CUTLER: Trust us, it's taken us longer than
16 what's on here, several times.

17 BURIL: We hope we've got the system streamlined
18 now and that it won't take longer.

19 Why don't we work off of this one now
20 because that's the end of the commonality between
21 OUs-1 and 3 and the OU-2 schedule. Why don't we go
22 to this one. This one is a little more complex. It
23 might take us a little longer. Once we understood
24 these, I'm hopeful this one will probably just fall
25 right out.

1 The next few items on the OUs-1 and 3
2 schedule, the long-term sampling events and so
3 forth, what this is basically is an indication that
4 we're going to be beginning the monitoring program
5 prior to all of our contractual requirements and so
6 forth. So we're going to start generating more data
7 here in order to supplement what we have. That's
8 one of the reasons why these are not marked as
9 critical path, is that these are just extra data and
10 it's just going to be the standard quarterly
11 monitoring that we agreed to. In the summary
12 schedule they're marked as blue because they're a
13 groundwater operable unit consideration.

14 The next one as you go down, on line 49,
15 the implementation of field activities, that's
16 basically getting out in the field and going to
17 work. You'll notice that starts the day after we
18 complete all our contractual requirements.

19 Another thing, just another tie between
20 the two schedules, if you take a look at the
21 implementation of field activities for this one and
22 this one, they're on the same day. So we're kicking
23 everything off at the same time. We aren't waiting
24 to do one operable unit, then the next. We're doing
25 them all at the same time.

1 This is just basically looking at the
2 requirements. We need to notify you folks, which is
3 required by the FFA, which is why that one is in
4 red. The field work to complete the three wells in
5 the OU-1 and 3, the 95 days is start to finish.

6 BISHOP: I think it's kind of picky, but you
7 probably could notify us 10 days before the 2nd and
8 have it start the day that you're ready to start.

9 BURIL: We could.

10 BISHOP: You're saying implementing activities
11 on the 2nd and then you're notifying us that you're
12 implementing activities and starting 10 days later.

13 BURIL: That's the way the FFA is written.
14 That's the only reason it's this way in the
15 schedule.

16 BISHOP: But this implementing --

17 BURIL: I understand what you're saying, Jon.
18 What you're saying is we could back up 10 days into
19 somewhere in here and say during the time we're
20 actually getting all this done we could notify you
21 folks and then start.

22 BISHOP: Right.

23 BURIL: I don't have a major problem with that
24 per se, but I'm seeing Dan shaking his head.

25 RANDOLPH: There's one other complication there,

1 too. At the same time we're notifying you we have
2 received our contractual authority to go ahead, we
3 have to notify the drillers for their mobilization
4 period.

5 BISHOP: That's fine. I'm not arguing with any
6 of that. But it seems funny that you're going to
7 say you're going to start and then you're actually
8 going to wait 10 days to start.

9 BURIL: One of the things, Jon, you might
10 remember is that the agency notification and the
11 driller mobilization are happening simultaneously.
12 Typical time to actually mobilize a driller to get
13 them on site is about two weeks.

14 BISHOP: That's fine. As long as you're not
15 going to get everything ready to go and give us 10
16 days' notice.

17 BURIL: No. We mobilize the drillers at the
18 same time we notify you, so that by the time we're
19 in the field your notification period is over and
20 we're out there.

21 BISHOP: Great.

22 RANDOLPH: Jon, we can't notify the drillers of
23 anything until we have authorization.

24 BISHOP: Right. I understand.

25 RANDOLPH: So we notify them and you at the same

1 time. And then we're hoping that the drillers are
2 able to mobilize in 10 days. The average has been
3 close to four weeks.

4 CUTLER: Typically they won't have rigs,
5 especially two rigs, in 10 days after we say "You
6 need to be here."

7 BURIL: We are going to be hopeful to push these
8 guys.

9 MELCHIOR: We're using technology which is in
10 such limited quantities here in the state and in the
11 region. If we were using hollow-stem auger, it's
12 one set of occurrences, versus this.

13 RANDOLPH: Chuck, we just want for people to
14 consider right now, too, we have been lucky in the
15 past where we have been able to use one drilling
16 company for both of our OU-1 and OU-2 field work at
17 the same time. At this particular venture and for
18 the additional work, we cannot guarantee that we're
19 going to have one drilling company. We may have to
20 have two or three. This has all been taken into
21 consideration in the schedule.

22 LOWE: I'm confused why it says field work for
23 95 days and then up here when you showed us in the
24 past how long it took, that best case scenario was
25 like 35 days and the worst case scenario was 85. So

1 I thought it was going to be 50 days of field work,
2 not 95.

3 CUTLER: But there's three wells.

4 LOWE: Oh, this is per well.

5 RANDOLPH: Correct.

6 CUTLER: This is for one 750 footer and the
7 other two are 500 footers.

8 BURIL: There's some compression there by doing
9 them simultaneously and some shortening because two
10 of them are shorter.

11 BISHOP: So you're going to be drilling for 95
12 days?

13 CUTLER: No, no. That's including well
14 development.

15 BURIL: No, that's all the process, the whole
16 process, to the point where we're ready to sample.
17 If we're going to be drilling for 95 days I'm going
18 to Tijuana. I don't want to deal with Ed Stone as
19 the director of JPL, because one of these wells is
20 going right outside his office.

21 NIOU: Was MW-16 a multi-port well?

22 BURIL: No. It's a standpipe well. None of the
23 wells in that quadrilateral that we discussed, none
24 of those are multi-port.

25 NIOU: How long did it take for those?

1 RANDOLPH: You don't want to know.

2 BURIL: That one was bad. That was one of the
3 bad ones.

4 CUTLER: MW-16 was real bad. That's a standpipe
5 well. That probably took as long as some of our
6 deeper --

7 NIOU: Is it the same drilling method?

8 CUTLER: That was a percussion. At about 180
9 feet we went through about a six-foot boulder.
10 During the drilling the rig started sinking and so
11 it was like we were stuck in this rock. It took
12 about three days --

13 BURIL: If you can envision putting a metal rod
14 and torquing it over like this and trying to pull it
15 out while it's torqued over, that's what was
16 happening to us.

17 CUTLER: Then the rig started sinking as we were
18 pulling it. You should have seen the crater out
19 there.

20 BURIL: We had a crater the size of just about
21 these two tables put together and just about this
22 deep, through the asphalt.

23 NIOU: This time you won't use that method,
24 right?

25 BURIL: We hope we won't hit a rock like that

1 where we have to pull as hard as we did. The method
2 itself was fine. It was the conditions that ended
3 up getting in our way that created the problem.

4 CUTLER: We're going to use mud rotary on these
5 deep multi-port wells.

6 RANDOLPH: We could very well be using that
7 particular method for the soil vapor well. We put
8 in the wells out there over 200 feet deep with air
9 percussion. Possibility.

10 BURIL: So items 49, 50 and 51, we understand
11 those. I guess I'll mark those green.

12 Then we get to item number 54 and the
13 subsequent things. This is a continuation of the
14 groundwater monitoring program. It's a third event,
15 but it also happens to be the first one that we're
16 going to be incorporating all the wells for the RI.

17 NIOU: Sorry to disturb you.

18 BURIL: That's all right.

19 NIOU: For the three wells are you going to use
20 only one driller, one rig?

21 BURIL: We'll use as many as we can get.

22 CUTLER: The schedule is set up for one rig for
23 the wells and at the same time B.G. is going to
24 start the soil vapor well. So there will be two
25 rigs on site, one doing the groundwater wells, and

1 one doing the vapor wells.

2 NIOU: For OU-2.

3 BURIL: Right.

4 CUTLER: As one rig moves off to the next
5 location, a well development crew will move on the
6 first location, and when that rig gets on the third
7 location. So we'll have three or four.

8 BURIL: They'll be rotating across. If it works
9 like we did with Operable Unit 3, of the last five
10 wells we did, we could conceivably have three or
11 four rigs operating at a time. We had, what, three
12 rigs at one time?

13 CUTLER: We could have three well development
14 rigs at one time before we're done.

15 BURIL: That's our plan right now and that's how
16 it's built into the schedule.

17 NIOU: So probably development will have a
18 different rig.

19 MELCHIOR: Oh, absolutely.

20 BURIL: We don't need one of those rotary mud
21 rigs to do the development. That's, what, \$300 an
22 hour? My God, that's nuts.

23 On this one, then, this is the first
24 groundwater sampling event that we actually get to
25 that has those new wells available for sampling.

1 And it's combined with the quarterly monitoring.
2 This is essentially broken out the same way as you
3 saw previously in the breakdown.

4 CUTLER: We'll actually start sampling all the
5 existing wells back here at the end of January. We
6 won't be done installing the new wells until near
7 the end of March. So it's staggered. So right when
8 the wells are in, we've sampled all the existing
9 wells and we just move to the three new wells and
10 then we're done.

11 BURIL: So we aren't lagging anything. They
12 finish the wells and we're there sampling.

13 CUTLER: There's going to be a lot of things
14 going on.

15 BURIL: Any questions there?

16 Line 61 is just a contractual thing, has
17 no impact on any of the scheduled deliverables.
18 It's our internal reminder to generate the next year
19 for the monitoring thing. Unless there is a
20 question, I'm going to mark that as a non-issue.

21 On the fourth long-term groundwater
22 sampling event, this is just in the second RI event
23 in order to have two data points from those three
24 new wells, as we've discussed, and follows the exact
25 same kind of time frame and schedule.

1 It doesn't look like anybody has got a
2 heartache for that one, so I'll mark that.

3 Are there any of these that we want to
4 discuss at length that are in the black? These are
5 all groundwater monitoring considerations.

6 BISHOP: Your annual report is not pushing
7 anything back, is it?

8 BURIL: No. In fact, if you look, the next one
9 here, it says prepare the risk assessment. It
10 starts in June of '97 and we're actually out here
11 sampling in the second RI event through that time
12 frame. I mean, we're developing the report
13 concurrently with starting this risk assessment. So
14 we're not holding anything back. There's a number
15 of tasks. If you look at the bar charts here, you
16 can see that these are occurring simultaneously
17 across.

18 Any questions on that?

19 First of all, are we all comfortable at
20 just skipping these here, the ones in black? Okay.

21 That brings us down to preparing the risk
22 assessment. Now, this one was identified as a
23 secondary document submittal.

24 Pete, I'm going to turn to you and let you
25 explain our rationale on that one.

1 ROBLES: What we want to do is do a risk
2 assessment that incorporates all of the risks from
3 all of the operable units.

4 BURIL: Basically, that's all it is.

5 ROBLES: We feel if we do a risk assessment for
6 each operable unit we may be leaving something out,
7 since this is one site, one impact for human health
8 issues.

9 BURIL: In terms of groundwater.

10 ROBLES: In terms of groundwater. So what we
11 want to do is do a document for the whole site.

12 BURIL: We're looking at that principally
13 because -- well, taking the concern regarding Well
14 10 down on the southerly part of the facility and
15 what might be happening in relation to Well 21.
16 Splitting those apart in terms of risk assessments
17 for one operable unit versus the next doesn't make a
18 lot of sense because what you do at Well 10 is
19 probably going to have some impact at Well 21.

20 So in some fashion we need to try and
21 incorporate that link. We're thinking that this
22 would be the way to do it, is to first of all get
23 the risk assessment. Since everything is going to
24 be driven by that, let's understand risk assessment
25 and focus our attentions on that. Once we have

1 that, the RI will essentially fall out. The rest of
2 it is not nearly as complex. And then we go on from
3 there. I mean, all the rest of it then just falls
4 from that point.

5 But we wanted to focus on that risk
6 assessment because that appears to be a potential
7 for a really complex issue, something that would be
8 good to have it broken out and addressed separately.

9 LOWE: So you're looking at tying OU-1, 2 and 3?

10 BURIL: No. Just OUs-1 and 3. Only the
11 groundwater OUs. Because OU-2, while it will have
12 some impact on OU-1, it's a different media and our
13 approach and our feasibility and so forth are likely
14 to be different.

15 LOWE: You're tying your RI together for OU-1
16 and OU-3 also, aren't you?

17 BURIL: Yes.

18 LOWE: I think it makes sense to tie the risk
19 assessment together, too. I don't really understand
20 why you're calling it a secondary document.

21 BURIL: That's the language in the FFA.

22 LOWE: It calls a risk assessment --

23 BURIL: It calls a risk assessment a secondary
24 document.

25 SCHUTZ: I think when that was set up, Debbie,

1 it was set up so that the risk assessment came in
2 prior to the RI submittal.

3 BURIL: That's exactly right. That's why we've
4 got it coming in ahead of the RI.

5 SCHUTZ: We set it up that way.

6 The one thing about your risk assessment,
7 I think what you're going to find is a lot of things
8 are going to fall out. When you do a baseline risk
9 assessment you're going to do a quick and dirty risk
10 assessment. I'm just wondering on some of the
11 timing here, just off the top, it looks like you're
12 starting in June of '97 and completing around May of
13 '98.

14 I have never had the experience where a
15 risk assessment would take a year, because basically
16 by then you've looked at your data. Things are
17 going to start falling out left and right. You're
18 going to have a few things that you have to carry
19 through.

20 BURIL: Now, one of the things that might help
21 in that regard, Michelle, is that if we're looking
22 at these things here, the review process, there's a
23 lot of time built into that. So that could shrink
24 possibly significantly there.

25 The development itself, if you look at it,

1 is only 90 days long. The rest of it is all review.
2 So it's not the actual development itself that takes
3 the time. It's all the review process with the
4 development. Now, if we're able to shrink that
5 review process in some fashion, then that whole
6 schedule is going to compress.

7 SCHUTZ: That's one place, too. I mean, I think
8 as a secondary document you really want to push
9 compressing that review process because it's through
10 the RI that if there's any problem with that risk
11 assessment that the regulators would --

12 BURIL: That's why we're hopeful to have the RI
13 resolved so that this second portion here as it's
14 incorporated into the RI -- or the RA, the risk
15 assessment resolved, as it moves into the RI there
16 are no issues. It basically falls out.

17 If you look at it the way we have it set
18 up right now, you can see two of these are going to
19 be submitted nearly on top of each other. The RI is
20 coming only two weeks after the risk assessment is
21 finished. That's the issue here, is we want to be
22 sure that we understand the RA, the risk assessment,
23 which is why we separated it out.

24 SCHUTZ: When do you get done with your field
25 work for 1 and 3?

1 BURIL: The field work completion is the middle
2 of March of '97.

3 SCHUTZ: Oh, March of '97. So there's just
4 really like a few months there.

5 BURIL: Now, that's the field work. That's not
6 having the data. The last data is probably going to
7 be available in the first part of August. So we've
8 already started our risk assessment using the first
9 data and are going to modify it when the second set
10 of data come in from the second RI event.

11 SCHUTZ: Wait. If you're done with your field
12 work in March, why is it that you're not --

13 BURIL: The drilling part of the field work, not
14 the sampling. That's the distinction.

15 CUTLER: Then after that there's two sampling
16 events. So we'll start the RI report before we have
17 all of our data.

18 SCHUTZ: Right.

19 BURIL: Then the second set of data, when it
20 comes in in August, we'll incorporate whatever
21 modifications it makes during the course of time.

22 I'm going to draw on this here since we've
23 already gone past it. Here is the point in time
24 here where --

25 SCHUTZ: I want to make a correction. When I

1 referred to the baseline risk assessment before, I
2 meant the screening risk assessment where things are
3 going to fall out. Just for clarification.

4 BURIL: Sure. That's fine.

5 Using blue here, here is where we actually
6 get all the data for the RI. This is second event.
7 Now we've got it all.

8 SCHUTZ: What's that date?

9 BURIL: That's August 1, '97.

10 You draw that down. Here is the risk
11 submittal here. We've already started a month plus
12 ahead of time and then we're going to incorporate
13 the rest of the data as it becomes available and
14 then finish it off on the risk assessment.

15 Now, if you look at this, we've tied the
16 risk assessment and the RI together. If you look at
17 the draft date for the risk assessment, that's
18 February 24, '98. You're going to get the RI about
19 three weeks later.

20 SCHUTZ: Just for clarification here, it says
21 that the complete draft risk assessment -- oh,
22 November '97, JPL --

23 BURIL: This is where all the review questions
24 come in. That's something we still have to resolve.

25 BISHOP: Are these not marked on there?

1 BURIL: Yes. The ones in red. These are the
2 ones in red that I've marked that still indicate a
3 concern. So those things could compress. I don't
4 know exactly what's going to happen, but they could
5 compress and that would shorten the overall
6 schedule.

7 BISHOP: I'm just going to let you know, on
8 number 96, I refuse to meet for 10 days.

9 BURIL: All that is, there's a requirement in
10 the FFA that states that we must meet within 10 days
11 after comments are received. That's what that's
12 supposed to try to designate.

13 Any other questions on this one? First of
14 all, have I resolved your question? I'm not sure I
15 have.

16 SCHUTZ: Is there any way of shortening that 90
17 days? Like I said, you're going to be doing your
18 screening risk assessment kind of throughout the
19 process.

20 MELCHIOR: We can't complete the draft until we
21 get the last set of data.

22 SCHUTZ: Which is like August 1st. You've got
23 August, September, October. That's three and a half
24 months.

25 BURIL: We think it's going to take that long.

1 MELCHIOR: We receive the data back --

2 CUTLER: It's actually more like these validated
3 data will probably be near the end of August.

4 SCHUTZ: Screening risk assessments, you're
5 sitting down with PRGs.

6 BURIL: Michelle, remember one thing, what we're
7 dealing with here is going to be several issues
8 regarding the interrelationship between Operable
9 Units 1 and 3. Based on what we're seeing right now
10 and the reason why we're going into this next
11 multimillion dollar phase of work is going to be an
12 exceedingly complex kind of thing to try to figure
13 out, and then ultimately trying to establish what
14 the risk is with that draws it out.

15 See, one of the things that I want to
16 remind you again about is we're not talking about
17 this just being the risk assessment. This is pretty
18 much all of the analysis that will go into that
19 total RI. All of the groundwater migration
20 patterns, all of contaminant fate and transport
21 considerations, then the risk assessment built into
22 that. So all of that is going to be going on
23 concurrently. That's an awful lot of work. That's
24 an awful lot of data crunching that has to go on
25 before we can actually get to the point of

1 submitting that report.

2 The thing about it is, though, is you're
3 still talking about getting an RI report and the
4 risk assessment in essentially this amount of time.
5 And that's for two operable units.

6 NIOU: Can I ask a side question from B.G.?

7 BURIL: Sure.

8 NIOU: How many soil boring vapor wells are 240
9 feet, or all of them?

10 RANDOLPH: Four of them.

11 BURIL: Four of them.

12 RANDOLPH: The ones that are denoted as four
13 deep soil vapor wells.

14 NIOU: Yes. Four of them. Those three are 100.
15 Right?

16 RANDOLPH: No. We have no idea. That will be
17 maximum.

18 NIOU: Maximum. Okay. Thank you.

19 BURIL: Are there any other questions about
20 this?

21 What I'd like to do, if it's agreeable,
22 and I don't know what you folks are thinking of, but
23 I feel pretty strongly that 90 days to generate the
24 risk assessment as a secondary document, with a
25 two-week lag time before you actually get the RI is

1 pretty reasonable. That's two operable units, two
2 reports. That's really moving.

3 ROBLES: Yes.

4 BURIL: Can we get concurrence on that
5 particular point? And then we can step out from
6 there.

7 SCHUTZ: I would say we should just keep moving
8 through. Obviously, it's up to Debbie whether she
9 wants to concur to something on the spot. I think
10 that's something the agency needs to look at closer.
11 I don't know. Debbie, it's your call.

12 LOWE: Yes. I think I'd like to talk to some of
13 the other risk assessors and see what a typical time
14 is to crank that out. It seems like a lot of it is
15 setting up your spreadsheets for how you want to
16 crunch your numbers. That can be done before you
17 even have your data.

18 MELCHIOR: That's the mechanism of providing the
19 analysis.

20 BURIL: That's the mechanism of providing the
21 analysis, is all that is.

22 Let me just restate one more time that
23 you're not just getting a risk assessment from this.
24 You're getting a risk assessment built into an RI
25 over this time frame for two operable units. That's

1 a significant amount of work for all the data we're
2 going to have available to us and to generate all
3 the stuff that we have, including trying to
4 understand what the computer models might factor
5 into this. We're not going to wait for computer
6 models, but we want to be able to have that
7 information to be able to factor into this.

8 LOWE: Factor into your risk assessment?

9 BURIL: The risk assessment is going to be based
10 on whether or not we've got a contaminant transport
11 consideration moving off the site or if we've got
12 something coming on site, or just what's going on.
13 Because of that issue, we need to understand what's
14 happening there. So all of that evaluation has got
15 to go on before the risk assessment can be
16 completed. That's what I'm saying, is we're not
17 talking about just the risk assessment here.

18 Even though this is shown as the risk
19 assessment being a solid task through here, there
20 may be chunks of time that the risk assessment is
21 actually being worked on and the remainder of the
22 time is the RI. So one will help feed the other,
23 but it's not as though there's one effort, then
24 another effort. The two are overlapped. It's just
25 broken out here for clarity.

1 If you want to talk to them, that's fine.

2 I tell you what, I guess I better mark
3 that one in red so we know that's still in question.

4 ROBLES: Question mark.

5 BURIL: The last two here, meet with the
6 agencies and so forth. The other one is just a
7 milestone, but meeting with the agencies is an FFA
8 requirement. So I would suggest we just mark that
9 in green and leave it alone.

10 Any comment on that?

11 BISHOP: I always love to meet with you, Chuck.

12 BURIL: I'm glad to hear that.

13 I guess we're probably in the same boat
14 with completing the draft OU-1/OU-3 RI report. If
15 you have questions about what's happening here,
16 because the time frames are literally simultaneous,
17 I would imagine you're going to have questions about
18 that as well.

19 LOWE: All right.

20 BURIL: And then the remaining ones are the same
21 kind of issue.

22 Do we want to talk about the seventh
23 long-term groundwater sampling event?

24 BISHOP: By then the actual field work, did you
25 start factoring in the dropping off of the time of

1 the field work?

2 CUTLER: After the first five, hopefully the
3 screens will start dropping out.

4 BISHOP: Right. We discussed that before.

5 BURIL: No, we haven't factored that in here
6 because we don't know. So we left it pretty much
7 the same as it has been. That may factor out.

8 BISHOP: You don't necessarily have to put it in
9 there, but it's something to think about.

10 BURIL: We're talking now two years away from
11 today, essentially two years from today this even
12 starting off. So we'll have time to reevaluate
13 that.

14 SCHUTZ: What's starting two years from now?

15 BURIL: Seventh long-term groundwater sampling
16 event.

17 SCHUTZ: I have a quick question.

18 I guess this was the original. This must
19 be the original FFA schedule for the RI/FS. It came
20 out of one of your documents. It's out of the work
21 plan.

22 Now, here it shows that what was
23 negotiated was once the work plan was finalized,
24 that was October '93, EPA would receive the RI in
25 September of '94, so that's 11 months.

1 And now looking at the new schedule, the
2 work plan addenda would be approved in June of '96
3 and the RI would come to EPA in March of '98. So
4 it's about 21 months versus the original 11 months.
5 But part of that has to do with new contracting? Is
6 that correct?

7 BURIL: Part of that is new contracting. Part
8 also is built in that you've got these two sampling
9 events here separated by 90 days.

10 CUTLER: That schedule there, besides the
11 contracting, there's only one sampling event.
12 Because we were going to sample the on-site well. I
13 won't give you the details, but in October of like
14 '93, that sampling event was going to be like a wet
15 season event. Then if you read in the work plan, we
16 said the next sampling event, I think was May or
17 June, would be the dry season event. So after the
18 new wells were installed there was only one sampling
19 event for the RI, if you read through the work plan
20 and the scope.

21 BURIL: We had already built in some work done
22 already.

23 CUTLER: There's a couple reasons why it's so
24 much shorter there, where this one here we're going
25 to put in two events.

1 BURIL: Let's add things up here with some of
2 the other things we're talking about just to answer
3 that question. These two things are going on
4 concurrently. We're talking about six months here.
5 Then we've got 90 days here. So there's nine
6 months.

7 So we're only talking a distinction here
8 that's outside of contractual and required waiting
9 times of three months. That three months is really
10 built in to try and address the fact that we're
11 dealing with two operable units now, as opposed to
12 one.

13 I'm not sure where that question was going
14 so I'm going to jump down here past the seventh
15 long-term groundwater sampling event, if there are
16 no other questions about that, and look at the FS
17 report. We're looking at this basically in the same
18 light as the RI. We think it's going to be the same
19 level of effort, which is why the time frame is
20 similar. It is going to be starting, if you take a
21 look, using our blue pen again, we're actually
22 beginning work on it only about a third of the way
23 into the RI effort. So we aren't waiting for one to
24 be complete and then the other. We're overlapping
25 these things fairly significantly.

1 In fact, if you look at the way the
2 schedule is set right now, you will be receiving the
3 risk assessment final and the FS RI on the same day.

4 SCHUTZ: FS RI?

5 BURIL: The risk assessment final. That's the
6 date we'll go final, rather. And the FS draft will
7 be happening on the same day.

8 BISHOP: The RI won't be?

9 BURIL: The RI has already been submitted to you
10 in draft on March 10th. If you look at the way this
11 is compressed --

12 In fact, one of the things that might be
13 of some benefit here, we've got one here that we put
14 together to try and show the kind of time frames
15 that are going to be required. What we did is we
16 tried to put ourselves in your shoes and see what
17 kind of efforts you were going to have to be
18 spending on these documents.

19 Let's just set it on the table.

20 This is starting from essentially day zero
21 back in January.

22 ROBLES: This is your review.

23 BURIL: These are your review times that you're
24 going to have to deal with. The blue is 1 and 3.
25 The black is OU-2. You can see all these things are

1 basically either notifications or review. There's
2 only one notification here, and that's the field
3 work.

4 But you can see between the two or three
5 operable units there's a hell of a lot of review
6 time that's being smashed in concurrently. We tried
7 to add this up. What we came up with is you've got
8 the equivalent of about 29 months of review time
9 granted you that's going to be compressed into 16.

10 ROBLES: It's the same with us.

11 BURIL: We're in the same boat.

12 ROBLES: So you have to understand that this is
13 an aggressive schedule. If you want to compress it,
14 you're going to have to compress your review time as
15 well.

16 NAKASHIMA: Where is the final FS?

17 BURIL: It should be there.

18 SCHUTZ: Just figure 60-60, 30-30. 120 and
19 another --

20 BURIL: Here is draft-final FS for OU-1 right
21 here. That's 20 days. That's the equivalent of a
22 month. 30 days.

23 Then draft final for OU-2 I think is right
24 here. There's one I missed in here. So there's
25 even more work than shown here.

1 SCHUTZ: It's just the draft-final missing.

2 BURIL: Right.

3 SCHUTZ: Then the agency review of draft ROD for
4 that operable unit is December '99.

5 CUTLER: So that's 14 months.

6 SCHUTZ: 14 months from a draft FS to draft ROD.
7 That's a long time. Then the proposed plan --

8 CUTLER: No, from final FS. You said from
9 draft. Final FS.

10 SCHUTZ: That's even longer, then. You're
11 making the argument stronger.

12 NIOU: The CWO for soil vapor data evaluation,
13 starting on March 13, '97. Right?

14 BURIL: Which schedule are you looking at,
15 Steven?

16 NIOU: The OU-2 RI --

17 BURIL: Can we hold off with the OU-2 discussion
18 until we're done with the OU-1?

19 NIOU: I'm sorry. I thought you guys --

20 BURIL: No, we're still wading our way through
21 the OU-1 schedule. So if we could stick with that,
22 it will help us out.

23 Debbie, one of the things that you
24 provided us, was it Mather Air Force Base?

25 LOWE: Yes.

1 BURIL: The time from the FS to the time of ROD
2 I think was about 14 months on that schedule.

3 SCHUTZ: When you're going through the RI you
4 should know at that time what your FS is going to
5 look like for the most part. You know it's wellhead
6 treatment or whatever you're going to do. You have
7 a good idea. It's just a matter of putting it in,
8 doing the work.

9 BURIL: This is our schedule. This is what we
10 think it's going to take us to do it.

11 LOWE: I don't think it was 14 months, because
12 we're supposed to get the draft FS in July. Then I
13 thought the draft ROD was coming at the end of the
14 year.

15 BURIL: To be honest with you, I thought it was,
16 but I could easily be wrong. I don't recall. I
17 thought it was a pretty good length of time.

18 We were trying to pattern ourselves after
19 an example. We asked you for that example to
20 specifically try and understand how much time we
21 should be anticipating taking. Because we hadn't
22 thought about going beyond the FS until we generated
23 this schedule.

24 LOWE: I can go grab that really quick.

25 BURIL: That might be helpful to a degree.

1 (Discussion held outside the record.)

2 LOWE: Chuck, it's actually a year from when the
3 draft FS comes out to when the draft ROD comes out.

4 BURIL: Let's take a look at what we're looking
5 at here. Draft FS would come out to you currently
6 in May '98. The draft ROD would land in your hands
7 in December of '99. So a year and a half.

8 Now, remember there's a lot of time built
9 in there for review, as it stands right now. If
10 that compresses, that will compress that schedule
11 somewhat.

12 I don't know if we'll make this. Cutting
13 it back to a year, I don't know. That's something
14 I'm not sure we'll be able to do.

15 RANDOLPH: Does that include the full 60 days,
16 or just 30 days?

17 BURIL: Now, there's a point.

18 LOWE: One thing that Michelle just brought up
19 is that the feasibility study is probably not going
20 to be that complicated because there aren't that
21 many things you can do with your groundwater.

22 BURIL: I'm in a position of saying we have no
23 idea what might be required in terms of remediation
24 here. If we're going to be talking about having to
25 go off site for a variety of issues, there are

1 things out there that we may use if it's going to be
2 restricted to on site. There may be things we do in
3 combination. There may be things if we only deal
4 with off site.

5 There's a lot of permutations here if we
6 start combining things. We need time to be able to
7 figure out how those permutations are going to have
8 an impact on us. We could separate these operable
9 units. Then you're going to have three schedules
10 and it's going to be expanded even more.

11 LOWE: No, I don't think it makes sense to tear
12 these operable units apart.

13 BURIL: I agree. That's why we put them
14 together.

15 What you're looking at now, you're looking
16 at approximately 17 months, 18 months from draft FS
17 to draft ROD. Now, realize in that time frame
18 you're getting, again, two operable units, two for
19 the price of one, and you're also going to be
20 finalizing three other reports during that time
21 frame as well because you've got the draft-final
22 risk assessment, the draft-final RI and the
23 draft-final FS all coming in that 18-month period,
24 plus a proposed plan that has to go through draft.
25 To get to draft ROD you're up to the point -- the

1 way we have it set right now is that the draft
2 proposed plan basically is finalized in this time
3 frame here. We don't call it out as a draft-final
4 proposed plan here. We incorporate your comments
5 into the proposed plan and then go to public
6 meeting.

7 If we start here at the FS to final ROD --

8 MELCHIOR: Just out of curiosity, how long did
9 the FS at Lockheed Burbank take?

10 LOWE: I wouldn't know.

11 MELCHIOR: Do any of you guys know?

12 BURIL: A long time. I know the lady who is in
13 charge of that. That's a long time.

14 MELCHIOR: That's a very similar problem to
15 this; really almost identical.

16 SCHUTZ: Then you should be able to get a copy
17 of theirs and word process.

18 ROBLES: No way. That's not a proper comment to
19 make.

20 This is a very aggressive program. I
21 really have a heartburn with this. I wanted the
22 schedule to be more padded because I think this is
23 too aggressive. I think it's aggressive because I
24 don't believe you as regulators are going to be able
25 to meet your commitment to the schedule, bottom

1 line.

2 SCHUTZ: That's really for the regulators to
3 worry about.

4 ROBLES: No, it is not! What recourse do I have
5 when you guys don't meet it, while you have a
6 recourse to come after me if I don't meet it?

7 SCHUTZ: You don't have to incorporate the
8 comments of the agencies pursuant to the FFA if they
9 don't get them in on time or they don't request an
10 extension in a timely manner.

11 That's what your, I guess, options are.
12 That's your recourse. You could tell EPA or the
13 State "We will not accept your comments because you
14 did not ask for an extension in a timely manner
15 pursuant to the FFA."

16 ROBLES: Then you can get me in the public
17 comment period and then I have to go back to
18 incorporate you comment.

19 LOWE: What are you talking about?

20 SCHUTZ: Public comment period is up to the
21 public.

22 ROBLES: That's not prudent because there is no
23 way I can go out with a document that doesn't have
24 your sanction on it. You can insert anything you
25 want after the formal comment period of the RPMs has

1 passed. So we're back to square one.

2 What I'm saying is you've got to
3 understand that this schedule is aggressive for us
4 and is aggressive for you. It's aggressive for both
5 of us. We did not pad this. We're trying to be as
6 prudent, and there are areas that I think we can
7 find. For example, the concurrent review is one
8 area, which I really think that has a good chance.

9 BURIL: Just as an aside, I've looked at that
10 kind of cross-eyed as I was looking at this
11 schedule. Even if we go to a three-way concurrent
12 review we're not going to save more than probably
13 eight or nine months off the schedule as a whole.

14 LOWE: That's a significant amount of time,
15 eight or nine months.

16 BURIL: If you believe that's significant,
17 that's fine. I have no problem with that. I like
18 your categorization of that. Personally I think
19 it's fairly significant.

20 But recognizing that if you do that, when
21 these documents start coming in, not only will we
22 have three and four documents at a time to review,
23 but so will you folks. Without having gone through
24 the work, just trying to eyeball it here, I can see
25 at one point in time where we could have as many as

1 six documents in hand in a 60-day time frame,
2 possibly, to get it done. That's flying beyond all
3 reason.

4 LOWE: Chuck, I think sometimes we need to stop
5 and look back at the bigger picture and look at JPL
6 was listed on the NPL in 1992, and, you know, when
7 the public comes and asks "What have you guys done?
8 What have you guys cleaned up?" It's 2002 before
9 we're doing any remediation at all.

10 BURIL: Now, recognize, too, that we haven't
11 dismissed the idea of doing interim remediation. We
12 also have treatment plants that are in place on
13 public supply wells that have been there for years
14 already. So if someone from the public were to say
15 "What have you done for me lately?" I'd say "I've
16 given you your drinking water back," because we're
17 paying for the plant to be able to treat that water,
18 and we have been for years.

19 LOWE: I think we should take a break for a few
20 minutes and let us talk for a little bit.

21 BURIL: Sure.

22 MELCHIOR: About 15 minutes? 20 minutes?

23 LOWE: 20.

24 MELCHIOR: Mine says 10 of, so let's say 10
25 after.

1 (A recess was taken from
2 2:49 P.M. to 3:23 P.M.)

3 BISHOP: What we were talking about was thinking
4 about essentially from the draft FS to the ROD
5 point. What are we talking about? 22 months? In
6 there?

7 BURIL: From when to when? From what points in
8 time to what points in time?

9 BISHOP: From agency reviews FS, draft FS. So
10 that's 7/16/98.

11 BURIL: Is that the beginning or end date?

12 BISHOP: That's the end date. To ROD goes final
13 5/11/2000. 22 months.

14 So what we're thinking about is all of
15 these have specific time lines in for comment
16 review, public comment, all that. But at this
17 point, when you get the agency comments back, you
18 already know pretty much what your draft-final is
19 going to look like, what your proposed plan is going
20 to look like from what your ROD is going to look
21 like.

22 Dan, do you have a difference of opinion?

23 MELCHIOR: I guess I've seen too many times,
24 being a remedial action contractor, where the
25 feasibility study goes in and a proposed remedy gets

1 selected and then the public comes back and says
2 "Heck no, we don't want that."

3 BISHOP: But think about what we're looking at
4 at JPL is a totally -- I mean at JPL, you've got an
5 on-site groundwater problem. There's not houses
6 around there. You don't have the --

7 MELCHIOR: I don't know. There's houses pretty
8 darn close to the facility.

9 BURIL: There's houses on the border, literally
10 on the property line. But I know where you're
11 going. Go ahead.

12 BISHOP: So you've got that. What are your
13 choices of technology there? You're going to pump
14 it or you're going to let it sit. You've got a lot
15 of choices there for that one.

16 For your off site you've got treatment
17 plants in place. You're either going to continue
18 those, upgrade their capacity or shut them off.
19 That's for these two.

20 I mean, this is not like BKK. You don't
21 have a lot of different choices that you're going to
22 try and deal with. You're not going to be
23 excavating the whole place. You're not going to be
24 putting in slurry walls. So at this point, once you
25 get the comments back from the agency, I would agree

1 with you until you get the comments back from the
2 agency you don't know if the FS is even on the right
3 track.

4 But once you get those back you pretty
5 much know what your proposed plan is. So the
6 two-year time frame from there to there seems like
7 that can be compressed and maybe compressed with a
8 statement that if public comment causes delays, that
9 extensions will be granted for public comment.

10 SCHUTZ: Those are always granted.

11 MELCHIOR: There are all these comment periods.

12 BISHOP: Wait. Wait. There may be specific
13 comment periods, but you get these comments back on
14 7/98.

15 MELCHIOR: That's line 96?

16 BISHOP: I'm sorry. 126.

17 MELCHIOR: 126. You're in the ROD. Okay.
18 Right. Agency review of ROD.

19 BISHOP: No. This is FS.

20 BURIL: FS is what it should be.

21 ROBLES: It's 126. That is a required review.

22 BISHOP: No, I don't have a problem with that.
23 I'm saying that from that point on you've got our
24 comments back. Then to get the next draft to
25 us --

1 BURIL: We've got 60 days, period.

2 BISHOP: Is that 60 days?

3 BURIL: That's 60 days. That's mandated.

4 That's why it's in purple.

5 BISHOP: So then we've got two months there. So
6 now from this point we've got 20 months. Right?

7 Now we've got a draft-final prepared. To do the
8 prepared plan and the ROD we're talking about almost
9 two years.

10 SCHUTZ: To go from a draft-final FS to a final
11 ROD. 20 months.

12 BURIL: So you're talking from draft-final to --

13 BISHOP: ROD goes final.

14 BURIL: -- to ROD goes final is 20 months.

15 BISHOP: 20 months. The ROD goes final on 5/11.

16 BURIL: The only thing that I would point out
17 here, Jon, in looking at this, this is why we color
18 coded these things, if you look at the ones that are
19 a color other than black, there's a significant
20 amount of time built in there that I'm not sure --
21 we could probably by agreement agree to shorten
22 that, but I'm not sure we want to based on what I
23 hope you realize this schedule is already telling
24 you you're going to have to do.

25 BISHOP: The proposed plan, after we've gone

1 through the feasibility study, the proposed plan is
2 going to be, what, five or six pages? It's just
3 going to say what you're going to implement out of
4 the feasibility study.

5 LOWE: Right. And the schedule has 45 working
6 days or two months to draft that five- or six-page
7 document.

8 BURIL: That's public involvement.

9 LOWE: I'm on line 179.

10 BURIL: 45 working days for that.

11 LOWE: All the proposed plan is is a quick
12 summary of what was in your FS, throwing in some
13 public involvement language that's standard about
14 what is Superfund and that kind of stuff.

15 BURIL: What kind of time frame, just so I have
16 an understanding of where you folks are coming from,
17 what kind of time frame would you think would be
18 more appropriate?

19 SCHUTZ: Kind of a cut and paste sort of a
20 thing. They have an internal review, but it's
21 exactly what's in the FS. This is like a no brainer
22 at this point. It's not like --

23 BURIL: That's something that is still one of
24 the issues that Cal Tech has. We get into that --

25 ROBLES: If we were talking about no intrusion

1 from off site, I would tend to agree with this
2 theory.

3 BISHOP: Wait a minute. Now, maybe I'm mistaken
4 about this, but the discussion about off site is who
5 is responsible for some contamination that may be
6 coming across that bottom portion of the site.

7 BURIL: That's right.

8 ROBLES: Right.

9 BISHOP: So are we talking about for OU-1?

10 MELCHIOR: Goes across.

11 BISHOP: Maybe I'm speaking out of place for
12 EPA, but I can't imagine EPA requiring you to clean
13 up below 20 parts per billion, which is what that
14 stuff is that's coming on site at monitoring Well
15 21.

16 BURIL: Do I hear a yea or nay?

17 BISHOP: You've got a downstream treatment plant
18 already in place on production wells.

19 BURIL: I understand. You're right.

20 ROBLES: I don't hear the choir.

21 LOWE: That's consistent with what we're doing
22 at other bases. At the other base I work on there's
23 something like three times MCLs and it's an area
24 that we're not going to actually treat.

25 BURIL: Are we in a position of discussing

1 action levels at this juncture to deal with the
2 issue of schedule?

3 BISHOP: But what you're talking about is you're
4 thinking that it's going to be a big issue that this
5 stuff is coming on and you're going to say "I will
6 not treat this as part of our on-site treatment
7 plant because it's coming in from off site."

8 BURIL: That's a potential.

9 BISHOP: That's what I think we're talking about
10 in terms of a long-term time thing because you're
11 concerned that we're going to come back and say
12 "Yes, you will," and it's going to go into dispute
13 and throws the whole schedule out the window anyway
14 once you go into dispute. So why are you building
15 that into the schedule?

16 BURIL: I'm not sure we have, Jon.

17 BISHOP: It seems to me a very long period of
18 time. At this point, I would expect when I review
19 this to know what is going in the draft FS. If the
20 draft FS doesn't tell me what is the recommended
21 alternative --

22 ROBLES: Let me make a recommendation. Chuck,
23 Dan, good suggestion.

24 BURIL: I may not have heard it because I was
25 listening to someone else.

1 ROBLES: I'm just saying it's a good
2 recommendation. Let's take this and talk about it
3 tonight.

4 BURIL: For cutting back on the proposed plan
5 development time?

6 ROBLES: Yes. I want to talk about this.

7 BURIL: I think that's a reasonable thing to do.

8 ROBLES: Because what I'd like to do is say I
9 either can or can't with certain assumptions that
10 are in it and given things --

11 BURIL: We have to get Foster Wheeler and
12 company involved.

13 ROBLES: Given things we have to have from the
14 regulators. If we can say we can get this, we can
15 give that. Because I like it, but I have some
16 uneasy feeling about it. But it's doable if there
17 are certain things that we can work out as agreement
18 between us. It is possible.

19 BURIL: Are you focusing principally, Jon, on
20 the proposed plan aspect of this?

21 BISHOP: And the ROD. Because the ROD is
22 essentially a reiteration of the proposed plan after
23 you incorporate public comments.

24 BURIL: Let me ask this, without knowing
25 anything about other sites. From draft proposed

1 plan to final ROD what has been Mather's schedule?

2 LOWE: That's not a good example. At Mather we
3 had the draft ROD a long time ago, and we went into
4 a long dispute about ARARs and other levels, which
5 doesn't sound like is going to be the case here.

6 BAKER: I can tell you a rule of thumb we've
7 typically used at EPA, not necessarily for a federal
8 facility, but just for projects that we do, if we
9 look at our typical annual deadlines as being
10 September 30th, if we have a commitment to do
11 something by September 30th to make it within the
12 fiscal year, if you don't have the proposed plan out
13 by, say, April or May, you're pushing it. So we
14 would generally say from, what's that? Six months?
15 Less than six months. You ought to be able to go
16 from the proposed plan to the record of decision
17 within less than six months.

18 MELCHIOR: That's fund lead sites.

19 BAKER: Yes, or PRP lead.

20 SCHUTZ: We even have negotiated -- an FFA I
21 negotiated was less than six months from proposed
22 plan to ROD. It's a reiteration of the FS and the
23 proposed plan that's in your ROD. It's cut and
24 paste for the most part at that point and the legal
25 language. You got your ARARs ironed out and all

1 that stuff in your FS.

2 ROBLES: In principle I can agree with what
3 Bishop is saying. But there are certain things that
4 you're saying that will make certain schedule items
5 fall out.

6 I want to put that in our minds to look at
7 it and come back maybe tomorrow, because I like the
8 idea. But I want to state that if these things
9 don't fall out, what's our next alternative?

10 CUTLER: I think this assumption is we will have
11 like a draft-final FS. Because this proposed plan,
12 this 45-day period begins basically the day we start
13 incorporating the agency comments into the FS. So
14 there's a little bit of a --

15 SCHUTZ: But within those 10 days you're going
16 to be talking with the agencies so you'll know what
17 the problems are.

18 MELCHIOR: That's a 10-day period so we'll
19 know --

20 SCHUTZ: What the problems are. Right.

21 MELCHIOR: That assumes there are no problems at
22 all.

23 SCHUTZ: That assumes you guys are talking, too,
24 with the regulators. Everybody is talking prior so
25 everybody knows what's coming up in the documents.

1 BISHOP: But this is draft-final so we've
2 already done the draft.

3 ROBLES: That's true.

4 BURIL: Right.

5 BURIL: Can I characterize this, Jon, I guess
6 speaking for all of you in kind of a lump sum, that
7 your concerns are really focused on what it's going
8 to take post-FS to get to ROD?

9 BISHOP: I think that's a huge chunk of time in
10 there that has -- you've already told us we can't
11 streamline the contractual part of it. So that's
12 one big chunk of time.

13 You've got another big chunk time on the
14 end that says it's almost two years from the FS to
15 the ROD. That should be able to be shrunk down
16 somehow. If we can't do it on one end we need to be
17 able to find someplace in there.

18 BURIL: I guess one of the things that I wonder
19 about is when you talk about going to final ROD,
20 there is, the way I have it characterized now, a
21 mandatory 60-day, 30-day concurrence cycle for the
22 draft-final ROD. Are you saying that we can limit
23 that in some fashion? What are the mechanisms that
24 you're anticipating to shrink that schedule?

25 BISHOP: I'm anticipating putting out the ROD

1 very soon after the proposed plan.

2 SCHUTZ: Versus waiting almost a year.

3 BISHOP: I'm also seeing putting the proposed
4 plan out almost immediately after comments from the
5 draft-final FS.

6 CUTLER: We will receive comments on the draft.

7 BISHOP: Right. We're talking about after
8 you've received comments.

9 CUTLER: If we don't get surprised. Say we're
10 really off course on the FS, we get those comments
11 and our schedule says we have 20 days to get our
12 plan. That's the worst case scenario I see.

13 LOWE: I think he said from the draft-final.

14 BURIL: I just want to understand all the
15 ramifications.

16 CUTLER: The schedule has it starting from the
17 draft. Once we get the comments on the draft FS,
18 our 45-day proposed plan period starts, according to
19 this. So if we're way off on our FS and we get
20 surprised with a lot of changes on our draft FS, our
21 schedule -- see what I'm saying?

22 BISHOP: I do. But I get confused. I
23 understand what you're saying. You already built
24 that in to be starting working on the proposed plan
25 essentially right after you get comments back.

1 CUTLER: I think that's why there's 45 days
2 given, is in case there's a lot of changes in the
3 FS, we can deal with those and then still have time
4 to get the proposed plan.

5 LOWE: But you'll be working on all of those and
6 finishing the draft-final FS and issuing that to us
7 in September. But the schedule still has the draft
8 proposed plan coming out in December.

9 MELCHIOR: The FS goes final in October, October
10 19, '98.

11 LOWE: The draft-final.

12 CUTLER: The draft-final FS?

13 BAKER: September '98 or October '98.

14 MELCHIOR: Whatever.

15 LOWE: Even if we look at the October date, then
16 the draft proposed plan is coming out two months
17 later. I understand that you wouldn't want to start
18 drafting the proposed plan until you have our
19 comments on the draft FS.

20 It just seems like you can compress this
21 schedule down so that you have the draft proposed
22 plan coming out right after your draft-final FS.

23 BURIL: What you're talking about, then, we've
24 got the draft-final --

25 CUTLER: That's not the way this says.

1 BURIL: You've got the draft-final FS starting
2 essentially the same day as we get your comments
3 back, which is May of '98.

4 Now, we have our 60-day window there to be
5 able to incorporate your comments and resolve any
6 things that might be there. So if I understood you
7 correctly, Debbie, you're talking about that you
8 understand our position of not wanting to begin the
9 proposed plan until after the comments are all
10 incorporated, we understand how everything is going
11 to come together for the FS. Correct? Is that a
12 fair characterization?

13 BAKER: Draft-final.

14 BURIL: Draft-final. Essentially we've
15 incorporated everything on the draft, everyone is in
16 agreement. We're up to the point now of being at
17 the end of the 60 days.

18 BISHOP: I think this is where we're getting
19 confused, is at the draft stage there may be some
20 significant comments.

21 BURIL: Yes. Absolutely.

22 BISHOP: At the draft-final there should not be
23 because we've already given you our comments. These
24 are just --

25 SCHUTZ: The draft-final stage is: Have you

1 incorporated our comments adequately or not? That's
2 all we look for at that point. We don't make new
3 comments unless you've added new text. That's not
4 the purpose.

5 ROBLES: They're basically saying, Chuck, it's
6 basically done at the draft-final stage so it's
7 really only the public comments that we're concerned
8 about.

9 BISHOP: That's what we're trying to get.

10 LOWE: I think your draft-final FS could come
11 out day one and then two weeks later your draft
12 proposed plan comes out.

13 BURIL: As opposed to two months.

14 BAKER: Because you actually start working on it
15 after you get the draft FS comments, not the
16 draft-final comments.

17 LOWE: Right. There shouldn't be any comments
18 on the final document.

19 BURIL: So what you're doing in the draft-final
20 development is basically perfunctory more than
21 anything else. It really shouldn't carry with it
22 any kind of real meat per se. It's really just a
23 matter of ensuring that all the "i"s are dotted,
24 "t"s crossed.

25 BISHOP: Well, on a site like this, I think it

1 is. There are sites where I wouldn't say that,
2 where I'd say there are a lot of different options
3 out here that have merit. Maybe I'm simplifying it
4 too much, but it seems to me you're not going to
5 have real exotic pumping patterns going on.

6 BURIL: That's part of what we're anticipating
7 finding out. With the dynamics that we've seen thus
8 far in the groundwater flow patterns, having seen
9 180-degree shifts and things of that nature, we
10 aren't sure.

11 BISHOP: But where is your contamination? Your
12 contamination is in that carbon tetrachloride that
13 has been there for 40 years.

14 ROBLES: Unless we find that missing spaceship,
15 we've now got a big problem.

16 BURIL: I'd agree with that. I can't argue with
17 you at all. You're right.

18 ROBLES: Let's take this back tonight. It has
19 merit.

20 BURIL: I'm just trying to be sure I understand
21 where they're expecting things to happen. As I see
22 it right now, you're saying from this point here,
23 which is essentially where we get your comments back
24 on the draft and --

25 CUTLER: They're saying after the draft-final is

1 done. Is that right?

2 BURIL: No, they aren't. It's different.

3 ROBLES: After the draft.

4 BURIL: We've got their comments on the draft
5 itself.

6 ROBLES: The draft-final is only for public
7 comment.

8 BURIL: We've completed item number 127, which
9 is essentially --

10 ROBLES: Because there shouldn't be that much
11 comment.

12 CUTLER: From the time we submit a draft-final
13 to you to the time we submit a draft proposal --

14 BURIL: Excuse me. Number 126. They're saying
15 we should be able to start developing our proposed
16 plan right there. What I'm trying to resolve in my
17 mind is I want to be sure that there's no confusion
18 here.

19 It sounds to me that what you're concerned
20 with is the length of time that we're taking on
21 compiling the data and so forth for the proposed
22 plan, not the sequence of events that lead up to
23 that.

24 BISHOP: Yes. I mean, the data is compiled in
25 the RI for the proposed plan.

1 LOWE: And the FS.

2 BURIL: That's just what I want to be sure.

3 Because the way the schedule is set now, the day
4 that we have your comments back and essentially the
5 review is complete on the draft document is the day
6 we start working on the proposed plan.

7 BISHOP: Right.

8 BURIL: I don't know how we can compress that
9 any more.

10 BISHOP: No, that's fine.

11 BURIL: I just want to be sure.

12 BISHOP: So you're starting at the right place.
13 Then it's taking you 20 months to get to the --

14 BURIL: It's the length of time that you're
15 talking about.

16 CUTLER: What would be a reasonable time, then,
17 after the draft-final FS is in before you think --

18 BURIL: Let me ask you this, now.

19 LOWE: I think someone could sit down and write
20 a proposed plan in like two or three days. Like I
21 said, it's a five- or six-page document. It's
22 excerpts out of the FS with some standard "What is
23 Superfund?" language in there.

24 BURIL: One question I want to ask, though, is
25 are you taking into account the required time frames

1 for public comment and so forth? Because these are
2 up there. We've got 30 days built in. We put a
3 contingency in for an additional 30 if anyone has
4 significant comments and asks for an extension.

5 Lowe: I don't think you should immediately
6 write that into your schedule. Because if the
7 public doesn't ask for a 30-day public comment
8 period you're getting this automatic other --

9 BURIL: I can't argue with that very strongly.
10 I don't have any problem with taking it out. That
11 was in there as a contingency because that is such a
12 complete unknown. We have no control over that at
13 all.

14 SCHUTZ: You automatically get the extra time.
15 If the public comes in, an extension is
16 automatically granted and that reflects against your
17 schedule.

18 BURIL: That's fine.

19 SCHUTZ: You don't have to worry about that.
20 You don't want to pad your schedule with something
21 like that, though.

22 BURIL: That's fine. So we're talking we could
23 cut a month there. But as far as the rest of this
24 goes in terms of these required times for public
25 comment period, that's the 30 days there. We're

1 only taking two weeks to go to four meetings to talk
2 to the public. We're going to be holding two of
3 these.

4 BISHOP: What date are you at there for that?

5 BURIL: This is April 28, '99.

6 BISHOP: So we went from October of '98. Is
7 that correct?

8 BAKER: Draft-final FS.

9 BISHOP: To April or May to take the stuff to
10 the public.

11 MELCHIOR: Actually March. The public comment
12 starts on March 25th.

13 BISHOP: It's going to take you five months from
14 the time you already know what you're going to do to
15 get something to the public.

16 MELCHIOR: No. Actually, it's four months.
17 Because the final goes out October 19th for public
18 comment.

19 BISHOP: I think where I'm concerned is that
20 once you've got the FS done you shouldn't need this
21 huge amount of internal review time to prepare and
22 review a proposed plan that is incorporating what
23 you've already got in your --

24 BURIL: You're talking about this sequence here?

25 BISHOP: I think so. I can't read that far

1 away.

2 BURIL: Line 180 through line 184.

3 MELCHIOR: We're talking about 179 as well,
4 Chuck.

5 BURIL: I know that's an issue. But the 45 days
6 that you're concerned about is the length of time,
7 saying that could take a shorter time. I've got
8 that identified. But what I'm also wanting to look
9 at is if there's the concern built around this
10 JPL/NASA review cycle here that I've already
11 identified.

12 BISHOP: We've got here prepares plan is 170
13 working days. What is that in terms of calendar
14 time? That's a year.

15 MELCHIOR: No. That's five months.

16 BURIL: No, it's longer than that. From the
17 start, 7/17, to announcing the public availability.
18 Now, if you want to talk about actually having it in
19 your hands, it's about six months.

20 MELCHIOR: Six months.

21 SCHUTZ: The other thing, too, if we can just
22 take a step back and look at the big picture, you're
23 going through your RI process. You screen things
24 out through your risk assessment. You know what
25 your problems are. You know where your problem

1 spots are. Right? You've defined the extent of
2 your contamination. That's the objective of your
3 RI. Right?

4 So then you're going into your FS. You
5 guys are talking all the time. You know basically
6 what you're going to put up for the alternatives and
7 you know basically what you're going to go after for
8 your alternative of choice. I mean, you know that
9 as you're working through the RI. You should have a
10 very good idea. There shouldn't be like some big
11 surprise.

12 BURIL: Let me cut to the bottom line just so I
13 have a feel where you're at. I want to get one
14 other data point, then I'm going to let it go.

15 About how much time would you anticipate
16 you could trim off this schedule?

17 BISHOP: I think you were saying instead of 22
18 months, you were talking about 12 months, something
19 like that.

20 BURIL: So you're looking at about 10 months
21 overall being able to trim off the schedule in some
22 fashion.

23 BISHOP: No, just off the back end here.

24 BURIL: Just off the back end.

25 BISHOP: We may be able to trim some more,

1 because you need to check and see about the review.
2 If you can't do that, you can't do it.

3 SCHUTZ: I guess what I was saying, so you're
4 going through the RI process. You're like walking
5 into the FS process at the tail end of your RI
6 process where you're doing the mechanics of the FS
7 process. You're writing everything up. You know
8 where you're going. You're talking with the
9 regulators. You guys have some idea as to where
10 you're headed with your FS. You get it down in
11 writing.

12 At the same time you can basically
13 probably be developing your proposed plan while
14 you're developing your FS. You know where you're
15 going at this point. It shouldn't be a big surprise
16 to anybody what your chosen alternative is going to
17 be. If you want to be proactive here, this is how
18 you could move through the process. And then after
19 your proposed plan, public comment, go to ROD, get
20 out there and then do something so that if the
21 public does come to NASA or JPL or Cal Tech and say
22 "What have you done?" you can show that you've --

23 BURIL: I hear you. I think we can take this
24 back tonight and try to figure out whether there's
25 something we can come to agreement on.

1 But if the driver for this, in my opinion,
2 is public comment and concern, then I would say that
3 we are going to be rushing something that, without
4 doing the analysis, that we could be rushing
5 something that could actually do the public a
6 disservice.

7 SCHUTZ: But you should be out there dealing
8 with the public now.

9 BURIL: We are.

10 SCHUTZ: If you're worried about getting the
11 public involved in the proposed plan and that's
12 where it's going to blow up it's way too late at
13 that point.

14 BURIL: I'm not worried about the public at all.
15 We've had this program going now for a number of
16 years. We have not had one significant public
17 concern voiced at all. The public, in essence, is
18 asleep with this.

19 BISHOP: What are you saying, Chuck?

20 BURIL: What I'm saying is if we're moving on
21 this and trying to accelerate this to show the
22 public that we've done something, my point would be
23 we can show them we've done quite a bit. We've
24 installed 20 plus wells, we've got water treatment
25 systems and have had them for years. Their

1 interests are protected, and they have been for
2 years.

3 BISHOP: I can say just from my management point
4 of view, they want to know what the hell is going
5 on. Hank, he couldn't come today. He said "Tell
6 them that that's twice as long as they need. Just
7 tell them that. Because they're just jerking you
8 around."

9 We've been going through this whole time,
10 but when did we start on that with him? In 1990,
11 '89 or something?

12 BURIL: I don't know. That was before my time.

13 BAKER: As far as shortchanging the public, I
14 think just because you're shortening the schedule
15 between the FS being out and the ROD being signed
16 doesn't mean -- I think it is possible -- if you're
17 already doing sort of regular community outreach and
18 stuff, you could be filling in people along the way
19 so that when the proposed plan stage arrives they
20 don't feel like you're only giving me 30 days.
21 We've gotten that comment before, "You guys took
22 eight years to get to this point and now we only
23 have 30 days to give you comment?"

24 I think the lesson we learned from that
25 was we shouldn't have only gone to them at that

1 point.

2 BURIL: I agree. In fact, one of the things
3 we'll probably end up talking about tomorrow, we
4 have these fact sheets and so forth, the whole
5 series of them that we had at the last RPM meeting.
6 We've incorporated all the comments and we're ready
7 to go to print with these things. We've got four of
8 them. They kind of prep people as to what the terms
9 are and so on and the kind of information they're
10 going to see. We have what I think is a pretty good
11 public affairs consideration.

12 My thought being only that if we're going
13 to get into a situation where we're allowing concern
14 of the public to drive the schedule and compression,
15 that we should really take a look at what the public
16 would be concerned about, my point being that the
17 public isn't concerned. We've mitigated the
18 concerns they might have by virtue of the fact we
19 have treatment plants.

20 ROBLES: Also a factor is, that your bosses are
21 saying that the schedule is too long. The
22 regulators have made the changes that have extended
23 this schedule, that includes EPA, Water Board, DTSC.

24 BURIL: The suggestions have come. We've found
25 them to be good. That's why we want to put them

1 into place.

2 ROBLES: So it's very hard for me to care when
3 your boss says that it's too long.

4 BISHOP: You know, Peter, it takes a huge amount
5 of review time every time we talk about a change to
6 go through the process, go cycling through it. So
7 you would like to say it's our fault. We think --

8 BURIL: It's mutual.

9 ROBLES: It's mutual.

10 BURIL: There's no question about that.

11 ROBLES: What I'd like to do is take your
12 suggestion, it has merit, to go back. It's a good
13 suggestion that we need to talk about.

14 BURIL: There's nothing wrong with taking a hard
15 look at this. I think some of the things you
16 pointed out today are reasonable and I think it's
17 worthwhile for us to pull these off the wall and go
18 back and see what we can pull together on.

19 I will try and contact my executive
20 management to see if I can do anything at all with
21 this review time consideration, because that will
22 save some time. Exactly how much I don't know. But
23 it will save some, possibly.

24 If we are able to shorten the schedule in
25 total by ten months, a year or whatever, I would

1 hope that you would view that as something positive
2 and that we could hopefully leave the idea of trying
3 to shorten by five days or ten days or something
4 some of these development times. I don't feel that
5 we need to get into the minutiae to that degree if
6 we can look at the overall picture and deal with
7 that.

8 BISHOP: I agree with that.

9 MELCHIOR: I got a comment someone made earlier,
10 I just wanted to write this down so -- if you don't
11 mind. Someone made a comment about the goal might
12 be to have the proposed plan delivered a couple of
13 weeks after the feasibility study goes final. Did I
14 misquote someone there?

15 SCHUTZ: I think it was the draft-final, wasn't
16 it?

17 LOWE: Yes.

18 MELCHIOR: It was draft-final. After the
19 draft-final is submitted to you?

20 LOWE: Right.

21 BURIL: And then have that two- or whatever week
22 window there. Something much less than it is now
23 for delivery.

24 LOWE: I think this is one place where we might
25 want to agree mutually to do shorter review times on

1 this. If it's going to be like less than a 10-page
2 document, I think we could commit to review it in 30
3 days or maybe three weeks.

4 BURIL: You're talking proposed plan. Right?

5 LOWE: Proposed plan.

6 BISHOP: What's in there now? 60 days?

7 LOWE: 60 days.

8 SCHUTZ: It probably won't take you guys 60 days
9 to incorporate comments on a 6-page or 10-page
10 document.

11 BURIL: In fact, we don't even have that in
12 here. We have a thing in here that says incorporate
13 agency comments before public release, essentially
14 30 days.

15 SCHUTZ: So that's more like 45 days or
16 something?

17 BURIL: If you look at the actual times in the
18 documents that are called out in the FFA, proposed
19 plan isn't one of them. There is no requirement for
20 the submittal of a proposed plan that I could see in
21 the primary document phase. It goes from
22 feasibility study to ROD, the secondary document
23 being the other way.

24 LOWE: The 30-30.

25 BURIL: So we've actually compressed just by

1 doing that.

2 ROBLES: We'll take this back to our hotel.

3 BURIL: Do we have a choice?

4 ROBLES: This is my twelfth hour standing.

5 LOWE: If you guys want to stay and use the room
6 for a while, that would be fine.

7 BURIL: I think we're probably going to need to
8 rethink, regroup and sit down. We're probably going
9 to be into this for a while tonight. I appreciate
10 the opportunity.

11 ROBLES: Start tomorrow at 9:00 o'clock?

12 LOWE: Sure.

13 (The proceedings adjourned at 3:59 P.M.)

14

15

16

17

18

19

20

21

22

23

24

25